



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

A 462122 DUPL

# THE IRON AGE DIRECTORY

1909

# THE IRON AGE

A

and

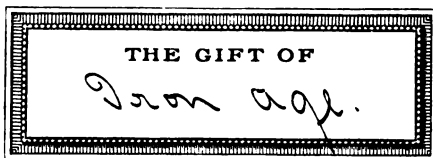
TI

R

bing.



N  
P  
F  
C  
E  
C



Place

nd and

h Ave.

en Sts.

In Sts.

ire St.

for St.

# THE IRON AGE DIRECTORY

**A Classified Index  
Of Goods Manufactured by Advertisers in  
The Iron Age**

**THIRTEENTH ANNUAL EDITION**

**Price Twenty-five Cents**

**One Copy is sent free to each subscriber to  
THE IRON AGE**

**DAVID WILLIAMS COMPANY**  
Publisher of  
**The Iron Age, The Metal Worker, and  
Carpentry and Building**  
New York, May, 1909



T  
12  
.I 71

## ANNOUNCEMENT.

---

**W**E take pleasure in presenting herewith to our subscribers the thirteenth annual edition of THE IRON AGE DIRECTORY, a classified index of the goods manufactured by the regular advertisers in THE IRON AGE. With the cordial co-operation of these manufacturers we have been enabled to enlarge its scope and secure greater accuracy.

For 55 years THE IRON AGE has been the recognized authority in the American Metal Trades and Industries, in whose development it has rendered important service. No other journal of its class has given every week such careful, conscientious attention to the varying phases of the markets, its very large staff consisting of men of long experience and unbiased minds.

The reading columns have not constituted the sole feature of value to our subscribers, but the advertising pages have also furnished a highly appreciated means of communication between seller and buyer which has steadily gained in usefulness as the number and importance of the advertisements have increased and the circulation and influence of the paper have grown.

THE IRON AGE also stands unique in the extent and character of its subscribers. They comprise the greater

manufacturers in the iron, steel, machinery and hardware trades, the leading wholesale dealers in hardware and machinery, the purchasing agents of nearly every American railroad system of any importance, and retail hardware and metal merchants in every nook and corner of the United States. No other journal in the world has an equal clientage among the buyers in the trades which it represents. In a large proportion of the houses in its line, both large and small, no important purchase is made without reference to it. Its paid foreign circulation is also large and of a high character, so that its advertising pages are found particularly useful to those who are seeking foreign outlets for their products.

The preparation of this book has involved much care and labor and no inconsiderable expense. A copy is being sent to each subscriber, in foreign countries as well as in America. We present it to them in the belief that it will deserve a place in every well organized office and will be found of constant use. Most of the puzzling questions continually arising in every mercantile and manufacturing establishment as to who makes some certain article may be readily answered by reference to THE IRON AGE DIRECTORY. With a well organized Bureau of Information the editors of THE IRON AGE are in a position to supplement it by direct correspondence.

DAVID WILLIAMS COMPANY,

14 and 16 Park Place,

New York.

# The Iron Age Directory

## Abrasives—

Abrasive Material Co., Philadelphia, Pa.  
Norton Co., Worcester, Mass.  
Pike Mfg. Co., Pike, N. H.

## Accumulators, Hydraulic—

Alliance Machine Co., Alliance, O.  
American Well Works, Aurora, Ill.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Birmingham Iron Foundry, Derby, Ct.  
Chambersburg Engineering Co., Chambersburg, Pa.

Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.  
Farrel Foundry & Machine Co., Ansonia, Ct.

A. Garrison Foundry Co., Pittsburgh, Pa.  
Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Mesta Machine Co., Pittsburgh, Pa.  
Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Penn Engineering Works, New Castle, Pa.  
Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.  
Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Waterbury Farrel Foundry & Mch. Co., Waterbury, Ct.

Watson-Stillman Co., 50 Church St., N.Y.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

## MERCHANTS.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

## Accumulators, Steam—

Watson-Stillman Co., 50 Church St., N.Y.  
D. R. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

## Acid, Sulphuric—

Hegeler Bros., Danville, Ill.  
Illinois Zinc Co., Peru, Ill.  
Matthiessen & Hegeler Zinc Co., La Salle, Ill.

## Acid Tanks, Tubs or Vats—

American Welding Co., Carbondale, Pa.  
Morgan Construction Co., Worcester, Mass.

## Acid Tanks, Wire Mill—

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

## Adding, Computing and Reckoning Machines—

Keuffel & Esser Co., 127 Fulton St., N.Y.

## Adjustable Blocking—

(See Blocking, Adjustable.)

## Adjusters, Blind—

Boston Pressed Metal Co., Worcester, Mass.

H. B. Ives Co., New Haven, Ct.  
Mallory Mfg. Co., Flemington, N. J.  
Millers Falls Co., 28 Warren St., N. Y.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Wire Goods Co., Worcester, Mass.

Worcester Pressed Steel Co., Worcester, Mass.

## Adjusters, Casement—

H. B. Ives Co., New Haven, Ct.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Yale & Towne Mfg. Co., 9 Murray St., New York.

## Adjusters, Hammock, Rope and Hitching Strap—

Covert Mfg. Co., Troy, N. Y.

Steel Basket Co., Cedar Rapids, Ia.

## Adjusters, Tire Automobile—

Long & Mann Co., Rochester, N. Y.

## Adjusters, Transom—

Boston Pressed Metal Co., Worcester, Mass.

Worcester Pressed Steel Co., Worcester, Mass.

## Adjusters, Window Stop—

H. B. Ives Co., New Haven, Ct.

## Advertising Novelties—

Globe Machine & Stamping Co., Cleveland, O.  
Otto Konigslow Mfg. Co., Cleveland, O.  
Frank Mossberg Co., Attleboro, Mass.

## Advertising Signs and Trays—

(See Signs and Trays, Lithographed Metal.)

## Adzes, Bridge, Carpenters'.

Coopers' Railroad, Ship-  
Hubbard & Co., Pittsburgh, Pa.  
L. & J. J. White Co., Buffalo, N. Y.

## Adzes, Ice—

(See Ice Harvesting Tools.)

## Agents, Bicycle Material.

John S. Leng's Son & Co., 33 Murray St., New York.

## Agents, Bicycle Sundries—

John H. Graham & Co., 113 Chambers St., New York.

John S. Leng's Son & Co., 33 Murray St., New York.

## Agents, Chains, Hoist—

Clinton E. Hobbs, Boston, Mass.

## Agents, Cordage—

Louisville Selling Co., Louisville, Ky.

## Agents, Hardware and Kindred Goods—

Burditt & Williams, Boston, Mass.  
John Chatillon & Sons, 85 Cliff St., N. Y.  
John H. Graham & Co., 113 Chambers St., New York.

Arthur Kugemann, Berlin, S. W., Germany.

John S. Leng's Son & Co., 33 Murray St., New York.

Charles Muller & Son Co., Utica, N. Y.  
Fred K. Wells Co., 18 Warren St., N. Y.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

Clinton E. Hobbs, Boston, Mass.

## Agents, I-Beam, Trolleys—

Clinton E. Hobbs, Boston, Mass.

**Agents, Phonograph—**

John S. Leng's Son & Co., 33 Murray St., New York.

**Agents, Resident, Foreign—**

Arthur Kugemann, Berlin, S. W., Germany.

**Agricultural Bolts, Chains, Shapes—**

(See Bolts, Chains, Shapes.)

**Agricultural Implements—**

Bateman Mfg. Co., Greuloch, N. J.

Keystone Farm Machine Co., York, Pa.

Kilborn & Bishop Co., New Haven, Ct.

Long & Allstatter Co., Hamilton, O.

Whitman & Barnes Mfg. Co., Chicago.

**Agricultural Machinery—**

Buffalo Forge Co., Buffalo, N. Y.

Ney Mfg. Co., Canton, O.

**Air Break Parts—**

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Air Chambers, Seamless****Copper—**

Naugatuck Mfg. Co., Naugatuck, Ct.

**Air Compressors—**

(See Compressors, Air.)

**Air Gauges, Receivers.**

Tanks—

(See Gauges, Receivers, Tanks.)

**Alarm Whistles—**

(See Whistles, Alarm.)

**Alarms, Electric, Burglar—**

W. R. Ostrander & Co., 22 Dey St., N. Y.

**Alarms, Electrical Tank—**

W. R. Ostrander & Co., 22 Dey St., New York.

**Alarms, High and Low Water—**

Lunkenheimer Co., Cincinnati, O.

**Alloys, Electrical Resistance—**

Indestructible Metal Co., 50 Church St., New York.

**Alloys, Gold and Silver—**

Riverside Metal Co., Riverside, N. J.

**Alloys, Steel (Ferro-Aluminum, Chrome, Manganese, Molybdenum, Nickel, Phosphorus, Silicon, Titanium, Tungsten, Vanadium)—**

Indestructible Metal Co., 50 Church St., New York.

C. W. Leavitt & Co., 30 Church St., N. Y.

Seavill Mfg. Co., Waterbury, Ct.

Seymour Mfg. Co., Seymour, Ct.

**Altar Bells—**

(See Bells, Altar and Lodge.)

**Aluminum—**

Aluminum Co. of America, Pittsburgh, Pa.

**MERCHANTS.**

Empire Metal Co., Syracuse, N. Y.

Janney, Steinnmetz & Co., Philadelphia.

C. W. Leavitt & Co., 30 Church St., N. Y.

**Aluminum Bars, Castings, &c.—**

(See Bars, Castings, &c.)

**Aluminum, Bronze—**

Ohio Brass Co., Mansfield, O.

**Aluminum, Granulated—**

Aluminum Co. of America, Pittsburgh, Pa.

**Aluminum, Ingot—**

Aluminum Co. of America, Pittsburgh, Pa.

**Aluminum, Perforated Sheet—**

Erdle Perforating Co., Rochester, N. Y.

Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.

Manhattan Perforated Metal Co., 237 Centre St., New York.

Chas. Mundt & Sons, 441 Pearl St., N. Y.

**Aluminum Welding—**

(See Welding, Aluminum.)

**Ammeters—**

Bristol Co., Waterbury, Ct.

General Electric Co., Schenectady, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Zucker & Levett & Loeb Co., 522-530 W. 25th St., New York.

**Ammeters, Recording—**

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Ammonia Fittings—**

(See Fittings, Ammonia.)

**Ammonia Indicators—**

(See Indicators, Ammonia.)

**Ammunition—**

(See Caps, Cartridges, Primers, Shells, Wads.)

**Ampere Recording Meters—**

(See Meters, Ampere Recording.)

**Amusement Outfitters for****Pleasure Resorts—**

Armitage & Guinn, Springfield, N. Y.

**Anchor Bolts—**

(See Bolts, Anchor.)

**Anchor Building—**

Belmont Iron Works, Inc., Philadelphia.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

W. J. Clark Co., Salem, O.

M. Lanz & Sons, Pittsburgh, Pa.

Western Foundry & Sash Weight Co., St. Louis, Mo.

**Anchor Post—**

(See Telegraph and Telephone.)

**Anchor, Screw—**

Diamond Expansion Bolt Co., 90 West St., New York.

Star Expansion Bolt Co., 147-149 Cedar St., New York.

**Anchor, Ship, Boat, &c.—**

Thomas Laughlin Co., Portland, Me.

W. & J. Tiebout, 118 Chambers St., N. Y.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Andirons—**

Anchor Post Iron Works, 27 Cortlandt St., New York.

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

R. W. Whitehurst Co., Norfolk, Va.

**Anemometers—**

Keuffel & Esser Co., 127 Fulton St., New York.

**Angle Bars—**

Carnegie Steel Co., Pittsburgh, Pa.

Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.

Lackawanna Steel Co., 2 Rector St., N. Y.

C. Pardee Works, Perth Amboy, N. J.

Republic Iron & Steel Co., Pittsburgh, Pa.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.  
Buell & Mitchell, 120 Liberty St., N. Y.  
North Works, Illinois Steel Co., Chicago, Ill.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.

**Angle Bore Bit Stock—**

(See Bit Stock, Angle Boring.)

**Angle Drives—**

(See Couplings, Quarter Turn Shaft.)

**Angles and Tees—**

American Bridge Co. of New York, 30 Church St., New York.

American Tube & Stamping Co., Bridgeport, Ct.

Bethlehem Steel Co., So. Bethlehem, Pa.

Carnegie Steel Co., Pittsburgh, Pa.

Forest City Steel & Iron Co., Cleveland, O.

Inland Steel Co., First National Bank Bldg., Chicago, Ill.

Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.

Jones & Laughlin Steel Co., Pittsburgh.

Lackawanna Steel Co., 2 Rector St., N. Y.

Lockhart Iron & Steel Co., Pittsburgh.

Phoenix Iron Co., 410 Walnut St., Philadelphia, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

Tennessee Coal, Iron & R. R. Co., 71 Broadway, New York.

**MERCHANTS.**

Belmont Iron Works, Inc., Philadelphia.

Bourne-Fuller Co., Cleveland, O.

Buell & Mitchell, 120 Liberty St., N. Y.

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

Arthur O. Harvey Co., Boston, Mass.

C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.

W. N. Kratzer & Co., Pittsburgh, Pa.

North Works, Illinois Steel Co., Chicago, Ill.

Ogden & Wallace, 577 Greenwich St., New York.

Pierson & Co., 29 Broadway, New York.

Horace T. Potts & Co., 316-320 N. 3d St., Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.

**Angles and Tees. Galvanized—**

(See Galvanized Angles, Bars, &c.)

**Animal Cages, Tethers—**

(See Cages, Tethers.)

**Annularing—**

Blake & Johnson Co., Waterbury, Ct.

Hubley Mfg. Co., Lancaster, Pa.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

I. S. Spencer's Sons, Guilford, Ct.

Worcester Pressed Steel Co., Worcester, Mass.

**Annunciator Wire—**

(See Wires, Electrical.)

**Annunciators—**

Holtzer-Cabot Electric Co., Boston, Mass.

W. H. Ostrander & Co., 22 Dey St., N. Y.

**Anodes, Copper and Bronze—**

Bridgeport Brass Co., 23 Broadway, N. Y.

H. A. Matthews Mfg. Co., Seymour, Ct.

Seymour Mfg. Co., Seymour, Ct.

**Anodes, Nickel—**

Seymour Mfg. Co., Seymour, Ct.

**Anti-Friction Metal—**

Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

Bridgeport Deoxidized Bronze & Metal Co., Bridgeport, Ct.

Theo. Hertz Metal Co., St. Louis, Mo.

Magnolia Metal Co., 113-115 Bank St., New York.

Merchant & Evans Co., Philadelphia, Pa.

Ohio Brass Co., Mansfield, O.

Phosphor Bronze Smelting Co., 2300 Washington Ave., Philadelphia, Pa.

Pittsburgh White Metal Co., Pittsburgh.

Paul S. Reeves & Son, Philadelphia, Pa.

Reeves Pulley Co., Columbus, Ind.

Riverside Metal Co., Riverside, N. J.

**MERCHANTS.**

Dodge Mfg. Co., Mishawaka, Ind.

Hill, Clark & Co., Boston, Mass.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

**Antimony—**

American Metal Co., 52 Broadway, N. Y.

Empire Metal Co., Syracuse, N. Y.

Hendricks Bros., 49 Cliff St., New York.

Theo. Hertz Metal Co., St. Louis, Mo.

C. W. Leavitt & Co., 30 Church St., N. Y.

Merchant & Evans Co., Philadelphia, Pa.

Pittsburgh White Metal Co., Pittsburgh.

Waite, Ranlet & Co., Boston, Mass.

**Anti-Rattlers, Carriage or**

**Thill—**

Fernald Mfg. Co., North East, Pa.

F. E. Kohler & Co., Canton, O.

New York Belting & Packing Co., 91-93 Chambers St., New York.

Raymond Mfg. Co., Conry, Pa.

**Anti-Seize Preparations—**

Smooth On Mfg. Co., Jersey City, N. J.

**Anvil and Vise—**

Billings & Spencer Co., Hartford, Ct.

Eagle Anvil Works, Trenton, N. J.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Anvil, Drill and Vise—**

(See Vises, Drill and Anvil.)

**Anvils, Axe Makers'—**

Eagle Anvil Works, Trenton, N. J.

Hay-Budden Mfg. Co., Brooklyn, N. Y.

**Anvils, Bench—**

Eagle Anvil Works, Trenton, N. J.

Goodell-Pratt Co., Greenfield, Mass.

Hay-Budden Mfg. Co., Brooklyn, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Anvils, Bit Makers'—**

Eagle Anvil Works, Trenton, N. J.

**Anvils, Blacksmiths'—**

Eagle Anvil Works, Trenton, N. J.

Hay-Budden Mfg. Co., Brooklyn, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Anvils, Chain Makers'—**

Eagle Anvil Works, Trenton, N. J.

Hay-Budden Mfg. Co., Brooklyn, N. Y.

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Anvils, Chisel Makers'—**  
Eagle Anvil Works, Trenton, N. J.

**Anvils, Cutlers'—**  
Eagle Anvil Works, Trenton, N. J.

**Anvils, Farmers' or Domestic—**  
Eagle Anvil Works, Trenton, N. J.

Hay-Budden Mfg. Co., Brooklyn, N. Y.  
Millers Falls Co., 28 Warren St., N. Y.

**Anvils, Farriers'—**  
Eagle Anvil Works, Trenton, N. J.

Hay-Budden Mfg. Co., Brooklyn, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Anvils, File Makers'—**  
Eagle Anvil Works, Trenton, N. J.

**Anvils, for Special Purposes, to Order—**  
Eagle Anvil Works, Trenton, N. J.

**Anvils, Instrument Makers'—**  
Eagle Anvil Works, Trenton, N. J.

**Anvils, Jewelers'—**  
Bancroft & Co., Philadelphia, Pa.

Billings & Spencer Co., Hartford, Ct.  
Prentiss Vise Co., 44 Barclay St., N. Y.

**Anvils, Plow Makers'—**  
Eagle Anvil Works, Trenton, N. J.

Hay-Budden Mfg. Co., Brooklyn, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Anvils, Razor Makers'—**  
Eagle Anvil Works, Trenton, N. J.

**Anvils, Saw Makers'—**  
E. C. Atkins & Co., Indianapolis, Ind.

Henry Disston & Sons, Philadelphia, Pa.  
Eagle Anvil Works, Trenton, N. J.

Hay-Budden Mfg. Co., Brooklyn, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

National Saw Co., Newark, N. J.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Anvils, Tool Makers'—**  
Eagle Anvil Works, Trenton, N. J.

Hay-Budden Mfg. Co., Brooklyn, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Apple Corers and Parers—**  
(See Parers, Apple.)

**Appraisers, Machinery, Manufacturing Plants—**  
Charles Behlen, 72 Trinity Pl., N. Y.

MacGovern, Archer & Co., 114 Liberty St., New York.

**Apron Carriers, Endless—**  
(See Carriers, Apron.)

**Aprons, Cotton and Wool—**  
Clinton Wire Cloth Co., Clinton, Mass.

Michigan Wire Cloth Co., Detroit, Mich.  
Wright Wire Co., Worcester, Mass.

**Aprons, Leather—**  
Graton & Knight Mfg. Co., Worcester, Mass.

**Aprons, Mechanics', Carpenters', &c.—**  
Specialty Mfg. Co., St. Anthony Park, Minn.

**Arbors—**  
(See Mandrels.)

**Arbors, Circular Saw—**

E. C. Atkins & Co., Indianapolis, Ind.  
Badger State Machine Co., Janesville, Wis.

Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.

Hobbs Mfg. Co., Worcester, Mass.  
National Saw Co., Newark, N. J.

Oliver Machinery Co., Grand Rapids, Mich.

Simonds Mfg. Co., Fitchburg, Mass.  
Wickes Bros., Saginaw, Mich.

**Arbors for Drill Chucks—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Oneida National Chuck Co., Oneida, N. Y.  
Standard Tool Co., Cleveland, O.

Union Mfg. Co., New Britain, Ct.  
(See Arbors for Drill Chucks.)

**Arbors for Shell End Mills—**  
(See Arbors for Drill Chucks.)

**Arbors for Shell Reamers—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

Cleveland Twist Drill Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Mch. Co., New Bedford, Mass.

Pratt & Whitney Co., Hartford, Ct.  
Standard Tool Co., Cleveland, O.

Whitman & Barnes Mfg. Co., Chicago.

**Are Lamps—**  
(See Lamps, Arc.)

**Arches, Cemetery—**  
(See Trellises, Wire.)

**Arches, Curved, Corrugated—**

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

Empire Iron & Steel Co., Niles, O.  
McCullough Iron Co., Wilmington, Del.

Newport Rolling Mill Co., Newport, Ky.  
Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

Youngstown Iron & Steel Roofing Co., Youngstown, O.

**Arches, Wire—**  
(See Trellises, Wire.)

**Architectural Iron Work—**  
(See Structural Metal.)

**Architectural Sheet Metal Work—**

E. B. Badger & Sons Co., Boston, Mass.  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

**Armature Binding Wire—**  
(See Wires, Electrical.)

**Armature Disc Notching Machines—**  
(See Notching Machines, Armature Disc.)

**Armature Discs—**  
(See Discs, Armature.)

**Armature Sheets—**  
American Sheet and Tin Plate Co., Pittsburgh, Pa.

**Armored Wire—**  
(See Wires, Electrical.)

**Armor Sealing Machines—**  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

**Arms, Cable—**  
(See Telegraph and Telephone Pole Supplies.)

**Army and Navy Scales—**  
(See Scales, Army and Navy.)  
**Arresters, Lightning—**  
General Electric Co., Schenectady, N. Y.  
Ohio Brass Co., Mansfield, O.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
**Arresters, Spark—**  
Byram & Co., Detroit, Mich.  
Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.  
Hendrick Mfg. Co., Carbondale, Pa.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Michigan Wire Cloth Co., Detroit, Mich.  
Charles Mundt & Sons, 441-447 Pearl St., New York.  
J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.  
W. S. Tyler Co., Cleveland, O.  
Whiting Foundry Equipment Co., Harvey, Ill.  
**Art Metal Work—**  
Buffalo Wire Works Co., Buffalo, N. Y.  
W. S. Tyler Co., Cleveland, O.  
Wright Wire Co., Worcester, Mass.  
Yale & Towne Mfg. Co., 9 Murray St., New York.  
**Artesian Well Pumps—**  
(See Pumps, Artesian Well.)  
**Artesian Well Supplies and Tools—**  
(See Well Supplies and Tools.)  
**Asbestos Coated Steel Sheets, Corrugated, &c.—**  
Asbestos Protected Metal Co., Canton, Mass.  
**Asbestos Protected Metal—**  
Asbestos Protected Metal Co., Canton, Mass.  
**Ash Cans, Sieves, Sifters—**  
(See Cans, Sieves, Sifters.)  
**Ashes and Coal Handling Stations for Locomotives—**  
Link Belt Co., Inc., Philadelphia, Pa.  
Webster Mfg. Co., 1075-1111 West Fifteenth St., Chicago, Ill.  
**Asphalt, Refined—**  
Asphalt Ready Roofing Co., 136 Water St., New York.  
National Roofing Co., Tonawanda, N. Y.  
**Asphalt Roof Coating—**  
Asphalt Ready Roofing Co., 136 Water St., N. Y.  
National Roofing Co., Tonawanda, N. Y.  
**Asphalt Roofing—**  
(See Roofing, Asphalt.)  
**Aspirators, Steam, Water or Air—**  
Uehling Instrument Co., Passaic, N. J.  
**Attachments, Pipe Wrench—**  
(See Wrench Attachments, Pipe.)  
**Attachments, Sash Cord and Ribbon—**  
(See Irons, Sash Cord and Ribbon.)  
**Auctioneers—**  
E. Bissell & Co., 5-7 Mercer St., N. Y.  
**Auger Handles—**  
(See Handles, Auger.)  
**Augers and Bits, Brace, Boring Machine, Car, Millwrights, Rafting, Ship, &c.—**  
Ford Auger Bit Co., Holyoke, Mass.  
John H. Graham & Co., 113 Chambers St., New York.

Irwin Auger Bit Co., Wilmington, O.  
Jackson Mfg. Co., Jackson, O.  
C. E. Jennings & Co., 42 Murray St., New York.  
Russell Jennings Mfg. Co., Chester, Ct.  
Kilborn & Bishop Co., New Haven, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Job T. Pugh, 31st and Ludlow Sts., Philadelphia, Pa.  
Russell & Erwin Mfg. Co., 94-96 Lafayette St., New York.  
Snell Mfg. Co., Fiskdale, Mass.  
James Swan Co., Seymour, Ct.  
**Augers, Breast—**  
Hubbard & Co., Pittsburgh, Pa.  
**Augers, Hollow—**  
Millers Falls Co., 28 Warren St., N. Y.  
Silver Mfg. Co., Salem, O.  
James Swan Co., Seymour, Ct.  
**Augers, Ice—**  
(See Ice Harvesting Tools.)  
**Augers, Post Hole—**  
Iwan Bros., South Bend, Ind.  
Mathias Klein & Sons, 87-89 Van Buren St., Chicago, Ill.  
**Augers, Twist—**  
Hubbard & Co., Pittsburgh, Pa.  
**Autogenous Welding—**  
(See Welding, Autogenous.)  
**Autographic Cash Records—**  
(See Recorders, Cash, Autographic.)  
**Automobile Chains—**  
(See Chain, Automobile.)  
**Automobile Fenders—**  
E. B. Badger & Sons Co., Boston, Mass.  
**Automobile Forgings—**  
(See Forgings, Automobile.)  
**Automobile Hoods—**  
E. B. Badger & Sons Co., Boston, Mass.  
**Automobile Lamps—**  
(See Lamps, Automobile, Acetylene and Oil.)  
**Automobile Lubricants—**  
(See Lubricants, Automobile.)  
**Automobile Monograms—**  
(See Monograms, Automobile.)  
**Automobile Parts—**  
American Tube & Stamping Co., Bridgeport, Ct.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Billings & Spencer Co., Hartford, Ct.  
Boston Gear Works, Norfolk Downs, Mass.  
Boston Pressed Metal Co., Worcester, Mass.  
Chicago Screw Co., 2 Canal St., Chicago, Ill.  
Clark Novelty Co., Rochester, N. Y.  
Crosby Co., Buffalo, N. Y.  
Detroit Screw Works, Detroit, Mich.  
Diamond Chain & Mfg. Co., Indianapolis, Ind.  
Ellwood Ivins Tube Works, Oak Lane Sta., Philadelphia, Pa.  
General Drop Forge Co., Buffalo, N. Y.  
Globe Machine & Stamping Co., Cleveland, O.  
Hartford Machine Screw Co., Hartford, Ct.  
Janney, Steinmetz & Co., Philadelphia.  
John R. Keim Mills, Inc., Buffalo, N. Y.  
Keystone Drop Forge Works, Chester, Pa.  
Kilborn & Bishop Co., New Haven, Ct.



Otto Konigslow Mfg. Co., Cleveland, O.  
 Lebanon Steel Casting Co., Lebanon, Pa.  
 W. H. Leland & Co., Worcester, Mass.  
 Homer F. Livermore, Boston, Mass.  
 Lunkenheimer Co., Cincinnati, O.  
 Mason Regulator Co., Boston, Mass.  
 National Cycle Mfg. Co., Bay City, Mich.  
 Ohio Brass Co., Mansfield, O.  
 Thomas Prosser & Son, 26 Platt St., N.Y.  
 Reeves Pulley Co., Columbus, Ind.  
 Richmond Forgings Corporation, Richmond, Va.  
 Sparks-Withington Co., Ltd., Jackson, Mich.  
 Strieby & Foote Co., Newark, N. J.  
 Susquehanna Casting Co., Wrightsville, Pa.  
 Turner Brass Works, Sycamore, Ill.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
 Whitlock Coil Pipe Co., Hartford, Ct.  
 Whitney Mfg. Co., Hartford, Ct.  
 Walter W. Woodruff & Sons Co., Mt. Carmel, Ct.  
 Worcester Pressed Steel Co., Worcester, Mass.  
 (See also Fittings, Automobile.)  
**Automobile Parts. Hardened and Ground.**  
 Detroit Screw Works, Detroit, Mich.  
**Automobile Pumps.**  
 (See Pumps, Bicycle and Automobile.)  
**Automobile Screw Machine Products.**  
 (See Screw Machine Products.)  
**Automobile Slip Joints.**  
 Irvington Mfg. Co., Irvington, N. J.  
**Automobile Specialties.**  
 Galvanized and Tin (Drip Pans, Cans, Funnel, Measures, Tanks, &c.)—  
 Dover Stamping & Mfg. Co., Cambridge, Mass.  
**Automobile Springs.**  
 (See Springs, Automobile.)  
**Automobile Starters.**  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
**Automobile Steering Devices.**  
 Boston Gear Works, Norfolk Downs, Mass.  
 Otto Konigslow Mfg. Co., Cleveland, O.  
 Ohio Brass Co., Mansfield, O.  
**Automobile Tanks.**  
 (See Tanks, Automobile.)  
**Automobile Tire Bolts.**  
 (See Bolts, Tire, Automobile.)  
**Automobile Tire Repair Sleeve.**  
 Graton & Knight Mfg. Co., Worcester, Mass.  
**Automobile Trucks.**  
 (See Cars, Gasoline Motor.)  
**Automobile Turn Tables.**  
 Bicycle Stepladder Co., 65 Randolph St., Chicago, Ill.  
 Arthur Koppel Co., Pittsburgh, Pa.  
**Automobiles.**  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 Lane Bros. Co., Poughkeepsie, N. Y.  
 J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

**Awl Hafts.**  
 (See Handles, Chisel, File, Awl, &c.)  
**Awl Handles.**  
 (See Handles, Chisel, File, Awl, &c.)  
**Awls, Belt.**  
 (See Awls, Scratch, Belt, &c.)  
**Awls, Brad.**  
 (See Awls, Peg, Brad, &c.)  
**Awls, Brass Crafters.**  
 Eyelet Tool Co., Boston, Mass.  
**Awls, Ice.**  
 (See Picks and Awls, Ice.)  
**Awls, Peg, Brad, &c.**  
 Elmore Tool Mfg. Co., Hartford, Ct.  
 H. H. Mayhew Co., Shelburne Falls, Mass.  
**Stanley Rule & Level Co., New Britain, Ct.**  
 Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.  
**Awls, Scratch, Belt, &c.**  
 Arcade Mfg. Co., Freeport, Ill.  
 Billings & Spencer Co., Hartford, Ct.  
 Buck Bros., Millbury, Mass.  
 Elmore Tool Mfg. Co., Hartford, Ct.  
 H. H. Mayhew Co., Shelburne Falls, Mass.  
 Millers Falls Co., 28 Warren St., N. Y.  
 Niagara Machine & Tool Works, Buffalo, N. Y.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.  
**Stanley Rule & Level Co., New Britain, Ct.**  
 James Swan Co., Seymour, Ct.  
 Tuck Mfg. Co., Brockton, Mass.  
**Awls, Thong.**  
 (See Awls, Scratch, Belt, &c.)  
**Awls, Tinner's.**  
 (See Awls, Scratch.)  
**Awning Fixtures.**  
 Fred J. Meyers Mfg. Co., Hamilton, O.  
 Star Expansion Bolt Co., 147-149 Cedar St., New York.  
**Awning Hardware.**  
 Thomas Laughlin Co., Portland, Me.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.  
 Star Expansion Bolt Co., 147-149 Cedar St., New York.  
 Wilcox, Crittenden & Co., Inc., Middletown, Ct.  
**Awning Hinges, Hooks, Pulleys.**  
 (See Hinges, Hooks, Pulleys.)  
**Awnings.**  
 Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
 Forest City Steel & Iron Co., Cleveland, O.  
 Stewart Iron Works Co., Cincinnati, O.  
**Awnings, Combination Window and Screen.**  
 Phenix Mfg. Co., Milwaukee, Wis.  
**Awnings, Curved Corrugated.**  
 Newport Rolling Mill Co., Newport, Ky.  
**Awnings, Hammock.**  
 I. E. Palmer Co., Middletown, Ct.  
**Axe Brackets, Stones.**  
 (See Brackets, Stones.)  
**Axes, Boys' Handled.**  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.  
 Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Axes, Broad—**  
L. & I. J. White Co., Buffalo, N. Y.  
**Axes, Chopping—**  
Wiebusch & Hilder, Ltd., 106-110 Lafayette St., New York.  
**Axes, Coopers—**  
L. & I. J. White Co., Buffalo, N. Y.  
**Axes, Dock—**  
L. & I. J. White Co., Buffalo, N. Y.  
**Axes, Fireman's—**  
L. & I. J. White Co., Buffalo, N. Y.  
**Axes, Hand—**  
L. & I. J. White Co., Buffalo, N. Y.  
**Axes, Ice—**  
Gifford-Wood Co., Arlington, Mass.  
L. & I. J. White Co., Buffalo, N. Y.  
**Axes, Ship—**  
L. & I. J. White Co., Buffalo, N. Y.  
**Axle Clips, Cutters, Grease, &c.—**  
(See Clips, Cutters, Grease, &c.)  
**Axle Iron—**  
(See Iron, Axle.)  
**Axle Straightening Presses—**  
(See Straightening Presses, Axle.)  
**Axles and Wheels—**  
Atlas Car & Mfg. Co., Cleveland, O.  
Chase Foundry & Mfg. Co., Columbus, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Arthur Koppel Co., Pittsburgh, Pa.  
Thomas Prosser & Son, 26 Platt St., N.Y.  
St. Louis Car Wheel Co., St. Louis, Mo.  
**Axes, Automobile—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Billings & Spencer Co., Hartford, Ct.  
Thomas Prosser & Son, 26 Platt St., N.Y.  
Standard Roller Bearing Co., 48th St. & Girard Ave., Philadelphia, Pa.  
**Axes, Car—**  
American Bridge Co., New York, 30 Church St., New York.  
Atlas Car & Mfg. Co., Cleveland, O.  
Block-Pollak Iron Co., Cincinnati, O.  
Carnegie Steel Co., Pittsburgh, Pa.  
Cleveland City Forge & Iron Co., Cleveland, O.  
Arthur Koppel Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.  
Otis Steel Co., Limited, Cleveland, O.  
Pennsylvania Forge Co., Philadelphia, Pa.  
Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
Thomas Prosser & Son, 26 Platt St., N.Y.  
St. Louis Car Wheel Co., St. Louis, Mo.  
Sheffield Car Co., Three Rivers, Mich.  
Tindel-Morris Co., Eddystone, Pa.  
Ernst Wiener Co., Church and Fulton Sts., New York.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.  
Industrial Supply & Equipment Co., 407 Sansom St., Philadelphia, Pa.  
Pierson & Co., 29 Broadway, New York.  
**Axes, Carriage and Wagon—**  
F. W. Wurster & Co., Brooklyn, N. Y.  
**Axes, Forged Steel or Iron—**  
American Bridge Co., New York, 30 Church St., New York.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Block-Pollak Iron Co., Cincinnati, O.  
Cleveland City Forge & Iron Co., Cleveland, O.

Carnegie Steel Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
New Castle Forge & Bolt Co., New Castle, Pa.  
Pennsylvania Forge Co., Philadelphia, Pa.  
Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
Thomas Prosser & Son, 26 Platt St., N.Y.  
St. Louis Car Wheel Co., St. Louis, Mo.  
Western Malleable Steel Co., Detroit, Mich.

**Axles, Locomotive, Driving and Truck—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
Cleveland City Forge & Iron Co., Cleveland, O.  
B. M. Jones & Co., Inc., Boston, Mass.  
Otis Steel Co., Ltd., Cleveland, O.  
Pennsylvania Forge Co., Philadelphia, Pa.  
Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
Thomas Prosser & Son, 26 Platt St., N.Y.  
St. Louis Car Wheel Co., St. Louis, Mo.  
**Babbitt Metal—**  
D. C. Adams, St. Louis, Mo.  
Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Bridgeport Deoxidized Bronze & Metal Co., Bridgeport, Ct.  
Clum & Atkinson, Rochester, N. Y.  
Dodge Mfg. Co., Mishawaka, Ind.  
Empire Metal Co., Syracuse, N. Y.  
Theo. Hiertz Metal Co., St. Louis, Mo.  
Magnolia Metal Co., 113-115 Bank St., New York.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Merchant & Evans Co., Philadelphia, Pa.  
Milwaukee Tack Co., Milwaukee, Wis.  
Ohio Brass Co., Mansfield, O.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Phosphor Bronze Smelting Co., Ltd., 2209 Washington Ave., Philadelphia, Pa.  
Pittsburgh White Metal Co., Pittsburgh, Pa.  
Paul S. Reeves & Son, Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.  
**Back Flaps—**  
(See Butts, Wrought Steel.)  
**Back Saws—**  
(See Saws, Hand, Panel, Back, &c.)  
**Backs, Portable Seat—**  
Richards Mfg. Co., Aurora, Ill.  
**Backs, Sink—**  
Barnes Mfg. Co., Mansfield, O.  
Humphreys Mfg. Co., Mansfield, O.  
**Badges and Medals—**  
American Railway Supply Co., 24 Park Place, New York.  
Geo. M. Ness, Jr., 61 Fulton St., N. Y.  
Schwerdtle Stamp Co., Bridgeport, Ct.  
L. S. Starrett Co., Athol, Mass.  
R. Woodman Mfg. & Supply Co., Boston.  
**Bag Fillers, Locks—**  
(See Fillers, Locks.)  
**Baggage Checks—**  
(See Checks, Baggage, Keys, &c.)  
**Baggage Hardware—**  
North & Judd Mfg. Co., New Britain, Ct.  
**Bails, Pail—**  
Morgan Spring Co., Worcester, Mass.

- Ballwoods**—  
(See Woods, Bail.)
- Bait, Trolling**—  
Andrew B. Hendryx Co., New Haven, Ct.  
Clark-Horrocks Co., Utica, N. Y.
- Bakers' and Confectioners' Tools, Machines, &c.**  
(Ovens, Yeast Buckets, Pie Racks, Scrapers, Basins, Cake Pans, Cake Cutters, Sieves, &c.)—  
Barbour-Stockwell Co., Cambridgeport, Mass.  
Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.
- Bakers, Wire**—  
Morgan Construction Co., Worcester, Mass.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.
- Bakers, Wire Coating**—  
(See Bakers, Wire.)
- Baking Pans**—  
(See Pans, Baking and Roasting.)
- Balances and Scales, Assay**—  
Eimer & Amend, 205 Third Ave., N. Y.
- Balances, Sash (House, Car, Ship, &c.)**—  
Caldwell Mfg. Co., Rochester, N. Y.  
Humphrey Machine Co., Keene, N. H.
- Balances, Spring**—  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Landers, Frary & Clark, New Britain, Ct.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.
- Balconies**—  
(See Iron Work, Builders', &c.)
- Bale Ties**—  
(See Ties.)
- Baling Wire**—  
(See Wire, Baling.)
- Ball Bearing Cups and Cones**—  
(See Cups and Cones, Ball Bearing.)
- Ball Bearings**—  
(See Bearings, Ball.)
- Ball Floats, Copper**—  
(See Floats, Copper Ball.)
- Ball Joints**—  
(See Joints, Universal.)
- Balling Irons**—  
(See Irons, Balling.)
- Ballots, Society**—  
H. O. Canfield Co., Bridgeport, Ct.
- Balls and Pins, Ten Pin**—  
John Sommer Faucet Co., Newark, N. J.
- Balls, Brass**—  
Lunkenheimer Co., Cincinnati, O.  
Pressed Steel Mfg. Co., Ridge Ave. & Willow St., Philadelphia, Pa.  
Standard Roller Bearing Co., 48th St. & Girard Ave., Philadelphia, Pa.
- Balls, Bronze**—  
Standard Roller Bearing Co., 48th St. & Girard Ave., Philadelphia, Pa.
- Balls, Cement Mill**—  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.
- Balls for Grinding Machines**—  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Strieby & Foote Co., Newark, N. J.
- Balls, Fuller Rubber**—  
New York Belting & Packing Co., 91-93 Chambers St., New York.
- Balls, Lignumvitae**—  
Boston & Lockport Block Co., East Boston, Mass.
- Balls, Mast Head**—  
Boston & Lockport Block Co., East Boston, Mass.
- Balls, Ox**—  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Walter W. Woodruff & Sons Co., Mount Carmel, Ct.
- Balls, Steel**—  
Allegheny Forging Co., Pittsburgh, Pa.  
Baldwin Steel Co., Charleston, W. Va.  
Bantam Anti-Friction Co., Bantam, Ct.  
Chapman Ball Bearing Co., Boston, Mass.  
Pressed Steel Mfg. Co., Ridge Ave. & Willow St., Philadelphia, Pa.  
Standard Roller Bearing Co., 48th St. & Girard Ave., Philadelphia, Pa.
- Balls, Steel Bowling**—  
Worcester Pressed Steel Co., Worcester, Mass.
- Balls, Tank, Rubber**—  
H. O. Canfield Co., Bridgeport, Ct.
- Balusters, Spun**—  
(See Architectural Sheet Metal Work.)
- Band Chimes**—  
(See Chimes, Church and Band.)
- Band Iron**—  
(See Hoops and Bands.)
- Band Saws**—  
(See Saws, Band.)
- Band Saws for Metal**—  
(See Saws, Band, for Metals.)
- Band Saw Steel**—  
(See Steel, Band Saw.)
- Bands, Gaff, Boom and Mast**—  
W. & J. Tiebout, 118 Chambers St., N. Y.
- Bands, Hose**—  
(See Hose Attachments.)
- Bands, Neck Yoke**—  
Advance Mfg. Co., Racine, Wisc.  
Wrought Washer Mfg. Co., Milwaukee, Wis.
- Bands, Shingle**—  
Acme Steel Goods Co., 2334-2340 Archer Ave., Chicago, Ill.
- Bands, Vehicle, Hub, Sand and Mud**—  
Sparks-Withington Co., Ltd., Jackson, Mich.
- Standard Welding Co.**, Cleveland, O.  
Walter W. Woodruff & Sons Co., Mount Carmel, Ct.
- Bank Fixtures**—  
Glen Mfg. Co., Ellwood City, Pa.
- Banks, Saving, Household**—  
Boston Pressed Metal Co., Worcester, Mass.
- Ideal Switch Co.**, Plainville, Ct.  
Worcester Pressed Steel Co., Worcester, Mass.
- Banquet Lamps**—  
(See Lamps, Banquet, &c.)
- Barb Wire**—  
(See Wire, Barb.)
- Barb Wire Machines**—  
Wilber Emery, Wilmington, Del.  
Henry Perkins Co., Bridgewater, Mass.
- Barbers' Shears**—  
(See Shears, Barbers'.)

- Barbing Machines, Wire Nail—**  
Humphrey & Sons, Joliet, Ill.
- Barnes and Halls, Steel—**  
American Bridge Co. of New York, 30 Church St., New York.  
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.
- Barn Door Bolts—**  
(See Bolts, Barn Door.)
- Barn Door Stay Rollers—**  
(See Rollers, Stay.)
- Barometers—**  
Keuffel & Esser Co., 127 Fulton St., New York.
- Barrel Covers, Drainers, Elevators, &c.—**  
(See Covers, Drainers, Elevators, &c.)
- Barrel Machinery and Tools—**  
Badger State Machine Co., Janesville, Wis.  
Peter Gerlach Co., Cleveland, O.  
Humphrey Machine Co., Keene, N. H.
- Barrels and Half Barrels, Steel—**  
W. J. Clark Co., Salem, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Wm. B. Scaife & Sons Co., Pittsburgh, Pa.
- Barrels, Ash and Garbage—**  
(See Cans, Ash and Garbage.)
- Barrels, Brass, Working, Oil and Artesian Wells—**  
Barnes Mfg. Co., Mansfield, O.
- Barrels, Drying Out—**  
Baird Machine Co., Oakville, Ct.
- Barrels, Grain, Safety—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.
- Barrels, Hoisting—**  
W. J. Clark Co., Salem, O.
- Barrels, Plating, for Small Articles—**  
Hanson & Van Winkle Co., Newark, N.J.  
U. S. Electro-Galvanizing Co., Brooklyn, N. Y.
- Barrels, Rifle—**  
J. Stevens Arms & Tool Co., Chicopee Falls, Mass.
- Barrels, Seamless Steel—**  
Pressed Steel Tank Co., Milwaukee, Wis.
- Barrels, Shipping—**  
(See Drums and Barrels.)
- Barrels, Steel—**  
(See Barrels and Half Barrels, Steel.)
- Barrels, Tumbling—**  
Baird Machine Co., Oakville, Ct.  
Byram & Co. (Inc.), Detroit, Mich.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.  
J. Gilmour, Bennett Bldg., New York.  
Globe Machine & Stamping Co., Cleveland, O.  
Henderson Bros., Waterbury, Ct.  
Humphrey & Sons, Joliet, Ill.  
Kimball Bros. & Sprague, Brockton, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
H. J. Miller's Sons, Bridgewater, Mass.  
Northern Engineering Works, Detroit, Mich.
- S. Obermayer Co., Cincinnati, O.  
J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.  
Henry Perkins Co., Bridgewater, Mass.  
Richmond Foundry & Mfg. Co., Inc., Richmond, Va.  
Ryersford Foundry & Machine Co., Ryersford, Pa.  
Louis Sacks Foundry Co., Newark, N. J.  
Sheffield Car Co., Three Rivers, Mich.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
Walton & Macks, Kokomo, Ind.  
Whiting Foundry Equipment Co., Harvey, Ill.
- Barrels, Water—**  
American Woodenware Mfg. Co., Toledo, O.
- Barrow Wheels—**  
(See Wheels, Barrow.)
- Barrows, Charging Foundry—**  
Bryant & Co., Detroit, Mich.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Barrows, Hand—**  
W. J. Clark Co., Salem, O.
- Barrows, Smelter—**  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Barrows, Wheel, Ash, Coal, Coke, Charcoal, &c.—**  
Atlas Car & Mfg. Co., Cleveland, O.  
O. W. Hunt Co., West New Brighton, N. Y.  
Keystone Farm Machine Co., York, Pa.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Oshorn Mfg. Co., Cleveland, O.  
J. W. Paxson Co., Philadelphia, Pa.  
Steel Basket Co., Cedar Rapids, Ia.  
Syracuse Chilled Plow Co., Syracuse, N. Y.  
Ernst Wiener Co., Church and Fulton Sts., New York.
- Barrows, Wheel, Baggage—**  
Atlas Car & Mfg. Co., Cleveland, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Syracuse Chilled Plow Co., Syracuse, N. Y.
- Barrows, Wheel, Brick—**  
American Fork & Hoe Co., Cleveland, O.  
Atlas Car & Mfg. Co., Cleveland, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Barrows, Wheel, Canal or Railroad—**  
American Fork & Hoe Co., Cleveland, O.  
Atlas Car & Mfg. Co., Cleveland, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Syracuse Chilled Plow Co., Syracuse, N. Y.

**Barrows. Wheel. Charging and Ore—**

Atlas Car & Mfg. Co., Cleveland, O.  
C. W. Hunt Co., West New Brighton,  
N. Y.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Meehan Boiler & Construction Co., Lowellville, O.

Osborn Mfg. Co., Cleveland, O.

J. W. Paxson Co., Philadelphia, Pa.

Syracuse Chilled Plow Co., Syracuse, N. Y.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Dirt—**

American Fork & Hoe Co., Cleveland, O.

Atlas Car & Mfg. Co., Cleveland, O.

Keystone Farm Machine Co., York, Pa.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Osborn Mfg. Co., Cleveland, O.

Syracuse Chilled Plow Co., Syracuse, N. Y.

**Barrows. Wheel. Foundry and Smelting—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Barrows. Wheel. Garden—**

Atlas Car & Mfg. Co., Cleveland, O.

Keystone Farm Machine Co., York, Pa.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Syracuse Chilled Plow Co., Syracuse, N. Y.

**Barrows. Wheel. General Purpose—**

American Fork & Hoe Co., Cleveland, O.

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Osborn Mfg. Co., Cleveland, O.

Steel Basket Co., Cedar Rapids, Ia.

Syracuse Chilled Plow Co., Syracuse, N. Y.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Mining—**

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Osborn Mfg. Co., Cleveland, O.

Syracuse Chilled Plow Co., Syracuse, N. Y.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Mortar or Concrete—**

American Fork & Hoe Co., Cleveland, O.

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Steel Basket Co., Cedar Rapids, Ia.

Syracuse Chilled Plow Co., Syracuse, N. Y.

**Barrows. Wheel. Oyster—**

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Packing-house—**

Atlas Car & Mfg. Co., Cleveland, O.

C. W. Hunt Co., West New Brighton, N. Y.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Pig Metal—**

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Salt—**

American Fork & Hoe Co., Cleveland, O.

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Stable or Sawdust—**

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Syracuse Chilled Plow Co., Syracuse, N. Y.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Stave—**

American Fork & Hoe Co., Cleveland, O.

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Stone—**

American Fork & Hoe Co., Cleveland, O.

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Syracuse Chilled Plow Co., Syracuse, N. Y.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Street Cleaning—**

Atlas Car & Mfg. Co., Cleveland, O.

**Barrows. Wheel. Tile—**

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Syracuse Chilled Plow Co., Syracuse, N. Y.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows. Wheel. Tubular Frame—**

(See Barrows, Wheel, Ash, Coal, Coke, Dirt, General Purpose, Mining, Pig Metal.)

**Barrows. Wheel. Wharf or Phosphate—**

Atlas Car & Mfg. Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Syracuse Chilled Plow Co., Syracuse, N. Y.  
Ernst Wiener Co., Church and Fulton Sts., New York.

**Barrows, Wheel, Wire Mill—**

Wright Wire Co., Worcester, Mass.  
Bars, Acid Open Hearth—  
Andrews Steel Co., Newport, Ky.

**Bars, Aluminum—**  
Aluminum Co. of America, Pittsburgh.

**Bars and Loops, Garment Hanger—**

Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.

**Bars and Segments, Commutator—**

Billings & Spencer Co., Hartford, Ct.  
Crocker-Wheeler Co., Ampere, N. J.  
Keystone Drop Forge Works, Chester, Pa.  
Kidd Bros. & Burgher Steel Wire Co., Allquippa, Pa.

Kilborn & Bishop Co., New Haven, Ct.  
Page-Storms Drop Forge Co., Chicopee, Mass.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Bars, Arch—**  
New Castle Forge & Bolt Co., New Castle, Pa.

**Bars, Bicycle Handle—**  
Consolidated Mfg. Co., Toledo, O.  
John R. Keim Mills, Inc., Buffalo, N. Y.

**Bars, Car Pinch—**  
(See Pushers, Car.)

**Bars, Chrome Steel—**  
Thomas Prosser & Son, 28 Platt St., N.Y.

**Bars, Chrome Steel, for Jails, &c.—**

Chrome Steel Works, Chrome, N. J.

**Bars, Copper—**  
(See Copper.)

**Bars, Crow and Claw—**

Hubbard & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

New Castle Forge & Bolt Co., New Castle, Pa.

**Bars, Digging and Tamping—**

Mathias Klein & Sons, 87-89 Van Buren St., Chicago, Ill.

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Bars, Eye—**

American Bridge Co. of New York, 30 Church St., New York.  
Carnegie Steel Co., Pittsburgh, Pa.

Phoenix Iron Co., 410 Walnut St., Philadelphia, Pa.

**Bars, Flagging—**

Hubbard & Co., Pittsburgh, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.

**Bars for Concrete Structures—**

Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.

Jones & Laughlin Steel Co., Pittsburgh, Pa.  
C. Fardees Works, Perth Amboy, N. J.

Republic Iron & Steel Co., Pittsburgh, Pa.

**Bars, Grate—**  
(See Grate Bars.)

**Bars, Ice—**

Gifford-Wood Co., Arlington, Mass.  
L. & I. J. White Co., Buffalo, N. Y.

**Bars, Iron—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Bethlehem Steel Co., So. Bethlehem, Pa.

Burden Iron Co., Troy, N. Y.

J. K. Dimmick & Co., New Land Title Bldg., Philadelphia, Pa.

Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.

Highland Iron & Steel Co., Terre Haute, Ind.

Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.

Lockhart Iron & Steel Co., Pittsburgh, Pa.

Milton Mfg. Co., Milton, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

Phoenix Iron Co., 410 Walnut St., Philadelphia, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

F. W. Wurster & Co., Brooklyn, N. Y.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.

Denman & Davis, 85-91 Lafayette St., New York.

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

Arthur C. Harvey Co., Boston, Mass.

J. H. Hillman & Son, Pittsburgh, Pa.

C. E. Houston & Co., Gerard Bldg., Philadelphia, Pa.

Ernest Law & Co., 15th and Market Sts., Philadelphia, Pa.

E. B. Leal & Co., Real Estate Trust Bldg., Philadelphia, Pa.

Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.

Edmund W. Mudge & Co., Pittsburgh, Pa.

F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

Pierson & Co., 29 Broadway, New York.

Horace T. Potts & Co., 316-320 N. 3d St., Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.

**Bars, Iron, Galvanized—**  
(See Galvanized Angles, Bars, &c.)

**Bars, Lining and Tamping—**

Hubbard & Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Bars, Locomotive Cylinder Boring—**  
(See Boring Bars, Locomotive Cylinder.)

**Bars, Mine Spike—**

Hubbard & Co., Pittsburgh, Pa.

**Bars, Muck—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Youngstown Sheet & Tube Co., Youngstown, O.

#### MERCHANTS.

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.  
C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.  
Jerome Keeley & Co., 421 Chestnut St., Philadelphia, Pa.  
J. Tatnall Lea & Co., 19 S. 12th St., Philadelphia, Pa.  
E. B. Leaf & Co., Real Estate Trust Bldg., Philadelphia, Pa.  
J. J. Mohr, 131 S. 4th St., Philadelphia, Pa.  
Edmund W. Mudge & Co., Pittsburgh, Pa.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Frank Samuel, 15th & Market Sts., Philadelphia, Pa.  
Wheeler, Miffin & Co., Fidelity Bldg., Philadelphia, Pa.  
E. H. Wilson & Co., 112 N. Broad St., Philadelphia, Pa.

**Bars, Open Hearth Sheet—**  
Allegheny Steel Co., Pittsburgh, Pa.  
Andrews Steel Co., Newport, Ky.

**Bars, Open Hearth Tin—**  
Allegheny Steel Co., Pittsburgh, Pa.  
Andrews Steel Co., Newport, Ky.

**Bars, Pinch and Prying—**  
(See also Pushers, Car.)  
Elmore Tool Mfg. Co., Hartford, Ct.  
Hubbard & Co., Pittsburgh, Pa.

**Bars, Fry—**  
C. E. Bonner Mfg. Co., Chrisman, Ill.

**Bars, Heated Iron—**  
Bethlehem Steel Co., So. Bethlehem, Pa.

**Bars, Sash, Show Window—**  
Fred. J. Meyers Mfg. Co., Hamilton, O.

**Bars, Screen—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.

**Bars, Shackle—**  
Hubbard & Co., Pittsburgh, Pa.

**Bars, Sheet—**  
Allegheny Steel Co., Pittsburgh, Pa.  
Andrews Steel Co., Newport, Ky.  
Carnegie Steel Co., Pittsburgh, Pa.  
La Belle Iron Works, Steubenville, O.  
Lackawanna Steel Co., 2 Rector St., N. Y.

Republic Iron & Steel Co., Pittsburgh, Pa.  
Youngstown Sheet & Tube Co., Youngstown, O.

#### MERCHANTS.

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.  
C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.  
Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.  
Edmund W. Mudge & Co., Pittsburgh, Pa.  
Joseph T. Ryerson & Son, Chicago, Ill.  
**Bars, Shutter—**  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Stanley Works, New Britain, Ct.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Bars, Spring Steel—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Thomas Prosser & Son, 26 Platt St., N.Y.

**Bars, Stay Bolt, Hollow—**  
Falls, Hollow Staybolt Co., Cuyahoga Falls, O.

**Bars, Stay Bolt, Solid—**  
Falls, Hollow Staybolt Co., Cuyahoga Falls, O.

Highland Iron & Steel Co., Terre Haute, Ind.

**Bars, Steel—**  
Allegheny Steel Co., Pittsburgh, Pa.  
American Bridge Co. of New York, 30 Church St., New York.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

American Tube & Stamping Co., Bridgeport, Ct.

Bethlehem Steel Co., So. Bethlehem, Pa.  
Braeburn Steel Co., Braeburn, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Chrome Steel Works, Chrome, N. J.  
Henry Disston & Sons, Philadelphia, Pa.  
Forest City Steel & Iron Co., Cleveland, O.

Highland Iron & Steel Co., Terre Haute, Ind.

Inland Steel Co., First National Bank Bldg., Chicago, Ill.

Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.  
Wm. Jessop & Sons, Ltd., 91 John St., New York.

Jones & Laughlin Steel Co., Pittsburgh.  
Kidd Bros. & Burgher Steel Wire Co., Alliquippa, Pa.

W. N. Kratzer & Co., Pittsburgh, Pa.  
La Belle Iron Works, Steubenville, O.  
Lackawanna Steel Co., 2 Rector St., New York.

Lockhart Iron & Steel Co., Pittsburgh.  
Nicoletown Plate Washer Co., 1822-1850 W. Juniata St., Philadelphia, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
C. Pardee Works, Perth Amboy, N. J.  
Pennsylvania Forge Co., Philadelphia, Pa.  
Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

Phoenix Iron Co., 410 Walnut St., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.  
Republic Iron & Steel Co., Pittsburgh, Pa.

Tennessee Coal, Iron & R. R. Co., 71 Broadway, New York.

#### MERCHANTS.

Belmont Iron Works, Inc., Philadelphia.  
Bourne-Fuller Co., Cleveland, O.  
Denman & Davis, 85-91 Lafayette St., New York.

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

Arthur C. Harvey Co., Boston, Mass.  
J. H. Hillman & Son, Pittsburgh, Pa.

C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.

Ernest Law & Co., 15th & Market Sts., Philadelphia, Pa.

E. B. Leaf & Co., Real Estate Trust Bldg., Philadelphia, Pa.

Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.  
Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.

North Works, Illinois Steel Co., Chicago, Ill.

Ogden & Wallace, 577 Greenwich St., N.Y.

Peterson & Co., 29 Broadway, New York.

Horace T. Potts & Co., 316-320 N. 3d St., Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Iron & Steel Co., 69 N. Halsted St., Chicago, Ill.

**Bars, Steel, Hollow—**  
Falls Hollow Staybolt Co., Cuyahoga Falls, O.

**Bars, Stoker—**  
(See Stoker Bars.)

**Bars, Tamping—**  
(See Bars, Digging and Tamping.)

**Bars, Tapping—**  
Byram & Co., Detroit, Mich.

**Bars, Telegraph Digging—**  
Hubbard & Co., Pittsburgh, Pa.

**Bars, Timber—**  
Hubbard & Co., Pittsburgh, Pa.

**Base Knobs—**  
(See Knobs, Base.)

**Bases, Display Stand—**  
H. A. Matthews Mfg. Co., Seymour, Ct.

**Bases, Post—**  
(See Caps and Bases.)

**Basin Plugs—**  
(See Plumbing Supplies.)

**Basket Handles, Wire—**  
(See Handles, Basket, Wire.)

**Basket Trucks—**  
(See Trucks, Basket.)

**Baskets, Bicycle—**  
Andrews Wire & Iron Works, Rockford, Ill.

**Baskets, Bolt—**  
Buffalo Wire Works Co., Inc., Buffalo, N. Y.

**Baskets, Bread or Cake, Nickel, Silver and Silver Plated—**

International Silver Co., 9-13 Maiden Lane, N. Y.

**Baskets, Brush—**  
New York Stamping Co., Brooklyn, N. Y.

**Baskets, Bushel—**  
Andrews Wire & Iron Works, Rockford, Ill.

**Baskets, Charging, Foundry—**

Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Clam—**  
(See Baskets, Oyster and Clam.)

**Baskets, Coal and Coke—**  
Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Corrugated—**  
Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Counter Display—**  
Parker Wire Goods Co., Worcester, Mass.

**Baskets, Fruit Display—**  
Standard Wire Co., New Castle, Pa.

**Baskets, Wire Goods Co., Worcester, Mass.**

**Baskets, Dipping—**  
Wright Wire Co., Worcester, Mass.

**Baskets, Factory and Mill—**  
Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Fish—**  
Buffalo Wire Works Co., Buffalo, N. Y.

**Baskets, Fruit Display—**  
Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Fruit Display—**  
Fred J. Meyers Mfg. Co., Hamilton, O.

**Baskets, Galvanized Steel—**  
Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Letter, Wire—**  
Andrews Wire & Iron Works, Rockford, Ill.

**Baskets, Mfg. Co., Troy, N. Y.**

**Baskets, Mfg. Co., Worcester, Mass.**

**Baskets, Moss, Hanging—**  
Dufur & Co., Baltimore, Md.

**Baskets, Oyster and Clam—**  
Fred J. Meyers Mfg. Co., Hamilton, O.

**Baskets, Oyster and Clam—**  
Dufur & Co., Baltimore, Md.

**Baskets, Oyster and Clam—**  
Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Park—**  
Wright Wire Co., Worcester, Mass.

**Baskets, Pottery—**  
Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Sheet Steel, Double and Wire Mesh Bottom—**

Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Soap—**  
(See Household Articles.)

**Baskets, Sponge, &c.—**  
Buffalo Wire Works Co., Buffalo, N. Y.

**Baskets, Sponge, &c.—**  
Dufur & Co., Baltimore, Md.

**Baskets, Sponge, &c.—**  
Estey Wire Works Co., 59 Fulton St., New York.

**Baskets, Sponge, &c.—**  
Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

**Baskets, Sponge, &c.—**  
Kilbourne Mfg. Co., Troy, N. Y.

**Baskets, Sponge, &c.—**  
Fred J. Meyers Mfg. Co., Hamilton, O.

**Baskets, Sponge, &c.—**  
Parker Wire Goods Co., Worcester, Mass.

**Baskets, Sponge, &c.—**  
Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

**Baskets, Sponge, &c.—**  
Wire Goods Co., Worcester, Mass.

**Baskets, Steel—**  
W. J. Clark Co., Salem, O.

**Baskets, Waste Paper—**  
Andrews Wire & Iron Works, Rockford, Ill.

**Baskets, Waste Paper—**  
Buffalo Wire Works Co., Buffalo, N. Y.

**Baskets, Waste Paper—**  
Dufur & Co., Baltimore, Md.

**Baskets, Waste Paper—**  
Estey Wire Works Co., 59 Fulton St., New York.

**Baskets, Waste Paper—**  
Kilbourne Mfg. Co., Troy, N. Y.

**Baskets, Waste Paper—**  
Fred J. Meyers Mfg. Co., Hamilton, O.

**Baskets, Waste Paper—**  
Parker Wire Goods Co., Worcester, Mass.

**Baskets, Waste Paper—**  
Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

**Baskets, Waste Paper—**  
Standard Wire Co., New Castle, Pa.

**Baskets, Waste Paper—**  
Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Waste Paper—**  
Wire Goods Co., Worcester, Mass.

**Baskets, Waste, Park and Street Corner—**

Steel Basket Co., Cedar Rapids, Ia.

**Baskets, Wire—**  
Andrews Wire & Iron Works, Rockford, Ill.

**Baskets, Wire—**  
Buffalo Wire Works Co., Inc., Buffalo, N. Y.

**Baskets, Wire—**  
Fred J. Meyers Mfg. Co., Hamilton, O.

**Baskets, Wire—**  
Howard & Morse, 45 Fulton St., N. Y.

**Baskets, Wire—**  
Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

**Bathroom and Toilet Specialties—**  
Gem Mfg. Co., Boston, Mass.

**Bathroom and Toilet Specialties—**  
Indestructible Metal Co., 50 Church St., New York.

**Bathroom and Toilet Specialties—**  
International Silver Co., Meriden, Ct.

**Bathroom and Toilet Specialties—**  
Kilbourne Mfg. Co., Troy, N. Y.

**Bathroom and Toilet Specialties—**  
Charles Parker Co., Meriden, Ct.

**Bathroom and Toilet Specialties—**  
Parker Wire Goods Co., Worcester, Mass.

**Bathroom and Toilet Specialties—**  
Taplin Mfg. Co., New Britain, Ct.

**Bathroom and Toilet Specialties—**  
Wire Goods Co., Worcester, Mass.



- Bathtubs—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.  
Humphreys Mfg. Co., Mansfield, O.  
Stuart & Peterson Co., Burlington, N. J.
- Batteries, Blasting—**  
Ingersoll-Rand Co., 11 Broadway, N. Y.
- Batteries, Electric, Dry Cell—**  
W. E. Ostrander & Co., 22 Dey St., N. Y.  
Rock Island Battery Co., Cincinnati, O.
- Batteries, Electric, Fluid—**  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
W. R. Ostrander & Co., 22 Dey St., N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
- Battery, Charging—**  
(See Dynamos, Battery Charging.)
- Battery Plates, Rolled Zinc—**  
Illinois Zinc Co., Peru, Ill.  
Mattinessen & Hegeler Zinc Co., La Salle, Ill.  
Sandova Zinc Co., 122 N. Peoria St., Chicago, Ill.
- Battery Zincs—**  
(See Zincs for Leclanche Batteries.)
- Bay Windows—**  
(See Architectural Sheet Metal Work.)
- Bedsteads, Hand—**  
Badger State Machine Co., Janesville, Wis.  
Niagara Machine & Tool Works, Buffalo, N. Y.
- Bedsteads, Sheet Metal—**  
F. W. Bliss Co., Brooklyn, N. Y.  
Ferracute Machine Co., Bridgeton, N. J.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Bedsteads, Machine & Tool Co., Buffalo, N. Y.**  
Peck, Stow & Wilcox Co., 27 Murray St., New York.
- Bedsteads, Rule & Level Co., New Britain, Ct.**
- Bedsteads, Sheet Metal—**  
F. W. Bliss Co., Brooklyn, N. Y.  
Ferracute Machine Co., Bridgeton, N. J.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Bedsteads, Machine & Tool Co., Buffalo, N. Y.**  
Peck, Stow & Wilcox Co., 27 Murray St., New York.
- Beds, Corner—**  
Youngstown Iron & Steel Roofing Co., Youngstown, O.
- Beams and Channels—**  
American Bridge Co. of New York, 30 Church St., New York.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Forrest City Steel & Iron Co., Cleveland, O.  
Inland Steel Co., First National Bank Bldg., Chicago, Ill.  
Jones & Laughlin Steel Co., Pittsburgh.  
Lackawanna Steel Co., 2 Rector St., New York.  
Phoenix Iron Co., 410 Walnut St., Philadelphia, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.
- MERCHANTS.**  
Belmont Iron Works, Inc., Philadelphia.  
Bourne-Fuller Co., Cleveland, O.  
Buell & Mitchell, 120 Liberty St., N. Y.  
Milworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.  
Metal & Supply Co., Brooklyn, N. Y.  
ur C. Harvey Co., Boston, Mass.
- C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.  
Interstate Engineering Co., Bedford, O.  
W. N. Kratzer & Co., Pittsburgh, Pa.  
Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.  
North Works, Illinois Steel Co., Chicago, Ill.  
Northern Engineering Works, Detroit, Mich.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Pierson & Co., 29 Broadway, New York.  
Horace T. Potts & Co., 316-320 N. 3d St., Philadelphia, Pa.  
Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
Scully Steel & Iron Co., 69 No. Halsted St., Chicago, Ill.  
Walsh's Sons & Co., Newark, N. J.
- Beams and Channels, Galvanized—**  
(See Galvanized Angles, Bars, &c.)
- Beams, Scale—**  
(See Scale Beams.)
- Bearing Metal—**  
Magnolia Metal Co., 113-115 Bank St., New York.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Merchant & Evans Co., Philadelphia, Pa.  
Ohio Brass Co., Mansfield, O.  
Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.  
Reeves Pulley Co., Columbus, Ind.
- Bearings, Axle Roller—**  
Bancroft & Co., Philadelphia, Pa.
- Bearings, Ball—**  
Bantam Anti-Friction Co., Bantam, Ct.  
Boston Gear Works, Norfolk Downs, Mass.  
Globe Machine & Stamping Co., Cleveland, O.  
Otto Konigslow Mfg. Co., Cleveland, O.  
McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.  
Pressed Steel Mfg. Co., Ridge Ave. and Willow St., Philadelphia, Pa.  
Schatz Mfg. Co., Chappaqua, N. Y.  
Sparks-Withington Co., Ltd., Jackson, Mich.  
Standard Roller Bearing Co., 48th St. & Girard Ave., Philadelphia, Pa.  
Worcester Pressed Steel Co., Worcester, Mass.
- Bearings, Ball and Roller Thrust—**  
Bantam Anti-Friction Co., Bantam, Ct.  
Chapman Ball Bearing Co., Boston, Mass.  
Poole Engineering & Machine Co., Baltimore, Md.  
Reeves Pulley Co., Columbus, Ind.  
Standard Roller Bearing Co., 50th St. and Lancaster Ave., Philadelphia, Pa.
- Bearings, Bronze, Rolling Mill—**  
Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.  
United Engineering & Foundry Co., Pittsburgh, Pa.
- Bearings, Car and Locomotive—**  
Paul S. Reeves & Son, Philadelphia, Pa.  
Richmond Foundry & Mfg. Co., Inc., Richmond, Va.  
T. H. Symington Co., Baltimore, Md.

**Bearings, Car Roller**—  
Bancroft & Co., Philadelphia, Pa.  
**Bearings, Electric Motor**—  
Ohio Brass Co., Mansfield, O.  
**Bearings, Lead Lined**—  
Bridgeport Deoxidized Bronze & Metal  
Co., Bridgeport, Ct.  
**Bearings, Oilless Shaft**—  
Paul S. Reeves & Son, Philadelphia, Pa.  
**Bearings, Oilless Shaft**—  
Boston & Lockport Block Co., East Boston, Mass.  
North American Metaline Co., Long Island City, N. Y.  
**Bearings, Ring Oiling**—  
Bancroft & Co., Philadelphia, Pa.  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.  
W. E. Caldwell Co., Inc., Louisville, Ky.  
Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.  
T. B. Wood's Sons Co., Chambersburg, Pa.  
**Bearings, Roller**—  
Atlas Car & Mfg. Co., Cleveland, O.  
Bancroft & Co., Philadelphia, Pa.  
Bantam Anti-Friction Co., Bantam, Ct.  
Boston & Lockport Block Co., East Boston, Mass.  
W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.  
National-Acme Mfg. Co., Cleveland, O.  
Sparks-Withington Co., Ltd., Jackson, Mich.  
Standard Roller Bearing Co., 48th St. & Girard Ave., Philadelphia, Pa.  
Ernst Wiener Co., Church and Fulton Sts., New York.  
**Bearings, Self-Oiling**—  
Bancroft & Co., Philadelphia, Pa.  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.  
W. E. Caldwell Co., Inc., Louisville, Ky.  
Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.  
Jones & Laughlin Steel Co., Pittsburgh.  
W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.  
Link-Belt Co., Inc., Philadelphia, Pa.  
Poole Engineering & Machine Co., Baltimore, Md.  
T. B. Woods Sons Co., Chambersburg, Pa.  
**Bearings, Side Car**—  
American Steel Foundries, 42 Broadway, N. Y.  
T. H. Symington Co., Baltimore, Md.  
**Bearings, Thrust**—  
(See Bearings, Ball and Roller Thrust.)  
**Bearings, Wood**—  
Piqua Handle & Mfg. Co., Piqua, O.  
**Beaters, Cake**—  
Dover Stamping & Mfg. Co., Cambridge, Mass.  
**Beaters, Clothes, Carpet, &c.**—  
Andrews Wire & Iron Works, Rockford, Ill.  
Arcade Mfg. Co., Freeport, Ill.  
Holt-Lyon Co., Inc., Tarrytown, N. Y.  
Malin & Co., Cleveland, O.  
Raymond Mfg. Co., Ltd., Corry, Pa.  
Standard Wire Co., New Castle, Pa.  
**Beaters, Egg**—  
Andrews Wire & Iron Works, Rockford, Ill.

Dover Stamping & Mfg. Co., Cambridge, Mass.  
Holt-Lyon Co., Inc., Tarrytown, N. Y.  
Kilbourne Mfg. Co., Troy, N. Y.  
Landers, Frary & Clark, New Britain, Ct.  
Lasher Mfg. Co., Davenport, Ia.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Parker Wire Goods Co., Worcester, Mass.  
Standard Wire Co., New Castle, Pa.  
Taplin Mfg. Co., New Britain, Ct.  
Wire Goods Co., Worcester, Mass.  
**Bed Casters, Fasteners, Links, Screws**—  
(See Casters, Fasteners, Links, Screws.)  
**Beds, Cooling**—  
Mesta Machine Co., Pittsburgh, Pa.  
Morgan Construction Co., Worcester, Mass.  
**Beds, Hot**—  
Mesta Machine Co., Pittsburgh, Pa.  
Morgan Construction Co., Worcester, Mass.  
**Beds, Straightening**—  
Morgan Construction Co., Worcester, Mass.  
**Bedsteads, Brass and Iron**—  
Dufur & Co., Baltimore, Md.  
**Beer Pump Supplies**—  
(See Pump Supplies, Beer.)  
**Bees Wax, Pattern**—  
J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.  
**Beet Shredding Knives**—  
(See Knives, Beet.)  
**Belaying Pins**—  
(See Pins, Belaying.)  
**Bell Cord Couplings**—  
(See Couplings, Bell Cord.)  
**Bell Cranks, Levers, &c.**—  
(See Levers, &c.)  
**Bell Hangers, Bits**—  
(See Bits, Bell Hangers.)  
**Bell Ringers**—  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
**Bellows, Blacksmiths', Molders', &c.**—  
S. Obermayer Co., Cincinnati, O.  
Osborn Mfg. Co., Cleveland, O.  
J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.  
Louis Sacks Foundry Co., Newark, N. J.  
Western Foundry Supply Co., 50 Church St., New York.  
**Bells, Alarm**—  
Bevin Bros. Mfg. Co., East Hampton, Ct.  
Reading Hardware Co., Reading, Pa.  
**Bells, Altar and Lodge**—  
Bevin Bros. Mfg. Co., East Hampton, Ct.  
**Bells, Automobile**—  
Bevin Bros. Mfg. Co., East Hampton, Ct.  
Frank Mossberg Co., Attleboro, Mass.  
**Bells, Bicycle**—  
Bevin Bros. Mfg. Co., East Hampton, Ct.  
Bridgeport Brass Co., 253 Broadway, N.Y.  
John H. Graham & Co., 113 Chambers St., New York.  
Frank Mossberg Co., Attleboro, Mass.  
**Bells, Call**—  
(See Bells, Tea and Call.)  
**Bells, Car**—  
Bevin Bros. Mfg. Co., East Hampton, Ct.  
John H. Graham & Co., 113 Chambers St., New York.  
National Tube Co., Pittsburgh, Pa.  
**Bells, Cow and Sheep**—  
Bevin Bros. Mfg. Co., East Hampton, Ct.

**Benches, Circular Saw—**  
Badger State Machine Co., Janesville, Wis.  
Fox Machine Co., Grand Rapids, Mich.  
Hobbs Mfg. Co., Worcester, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Oliver Machinery Co., Grand Rapids, Mich.

**Benches, Core Makers'—**  
Whiting Foundry Equipment Co., Harvey, Ill.

**Benches, Draw—**  
(See Draw Benches.)

**Benches, Factory and Shop Work—**  
Manufacturing Equipment & Engineering Co., Boston, Mass.

**Benches, Folding—**  
Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

**Benches, Hydraulic Draw—**  
(See Draw Benches, Hydraulic.)

**Benders, Bicycle Spoke—**  
(See Spoke Headers and Benders, Bicycle.)

**Benders, Pipe, Wire—**  
Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Raymond Mfg. Co., Corry, Pa.

**Benders, Rail—**  
Allegheny Forging Co., Pittsburgh, Pa.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Espen-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.

Hilles & Jones Co., Wilmington, Del.

Industrial Supply & Equipment Co., 407 Sansom St., Philadelphia, Pa.

Long & Allstatter Co., Hamilton, O.

Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.

Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

Sheffield Car Co., Three Rivers, Mich.

Watson-Stillman Co., 50 Church St., N.Y.

Ernst Wiener Co., Church and Fulton Sts., New York.

Williams, White & Co., Inc., Moline, Ill.

**Benders, Tire—**  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Buffalo Forge Co., Buffalo, N. Y.

Champion Blower & Forge Co., Lancaster, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Wiley & Russell Mfg. Co., Greenfield, Mass.

Williams, White & Co., Inc., Moline, Ill.

**Bending and Forming Iron and Steel, to Order—**  
W. J. Clark Co., Salem, O.

**Bending Machines—**  
(See Forming and Bending Machines.)

**Bending Machines, Angle and Eye—**  
Cleveland Punch & Shear Works Co., Cleveland, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Williams, White & Co., Inc., Moline, Ill.

**Bending Machines, High Speed Building—**  
Ajax Mfg. Co., Cleveland, O.

**Bending Machines, Hydraulic—**

Bertsch & Co., Cambridge City, Ind.

Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Watson-Stillman Co., 50 Church St., N.Y.

Williams, White & Co., Moline, Ill.

**Bending Machines, Hydraulic Rail—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Watson-Stillman Co., 50 Church St., N.Y.

**Bending Machines, Portable Pipe—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Bending Machines, Tube—**  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Schuchardt & Schutte, 90 West St., N. Y.

Watson-Stillman Co., 50 Church St., N.Y.

**Bends, Brass, Return—**  
Lunkenheimer Co., Cincinnati, O.

**Bends, Wrought Iron, for Steam Plants—**  
Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.

National Pipe Bending Co., New Haven, Ct.

**Bent Riffers—**  
(See Riffers, Bent.)

**Berry Bowls, Dishes—**  
(See Bowls, Dishes.)

**Berry Washers—**  
(See Kitchen Articles, Wire.)

**Berths and Bunks, Wire—**  
Buffalo Wire Works Co., Inc., Buffalo, N. Y.

**Bessemer Coppered Rods—**  
(See Rods, Bessemer, Coppered.)

**Bevels—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

Henry Diston & Sons, Philadelphia, Pa.

Fawcett Machine Co., Pittsburgh, Pa.

C. E. Jennings & Co., 42 Murray St., N. Y.

New Process Raw Hide Co., Syracuse, N. Y.

Quirde Co., Syracuse, N. Y.

Stanley Rule & Level Co., New Britain, Ct.

L. S. Starrett Co., Athol, Mass.

**Bevels, Ship Carpenters'—**  
Chapin-Stephens Co., Pine Meadow, Ct.

**Bevels, Sliding T—**  
National Saw Co., Newark, N. J.

**Bicycle Bells, Forgings—**  
(See Bells, Forgings, &c.)

**Bicycle Chain—**  
(See Chain, Bicycle.)

**Bicycle Lamps—**  
(See Lamps, Bicycle.)

**Bicycle Machinery—**

Adriance Machine Works, Brooklyn, N. Y.  
Billings & Spencer Co., Hartford, Ct.  
Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Ferracute Machine Co., Bridgeton, N. J.  
Fox Machine Co., Grand Rapids, Mich.  
Garvin Machine Co., Spring and Varick  
Sta., New York.  
Hoefler Mfg. Co., Freeport, Ill.  
Manning, Maxwell & Moore, Inc., 85 Liberty  
St., New York.  
New Haven Mfg. Co., New Haven, Ct.  
Niles-Bement-Pond Co., 111 Broadway, N. Y.  
Stow Flexible Shaft Co., 26th & Callow-  
hill Sts., Philadelphia, Pa.  
Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.  
Zeh & Hahnemann Co., Newark, N. J.

**MERCHANTS.**

W. P. Davis Mach. Co., Rochester, N. Y.  
Hannan-Finton Co., Springfield, Mass.  
Marshall & Huchart Machinery Co., 62-  
64 So. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co.,  
Cleveland, O.  
Prentiss Tool & Supply Co., 115 Liberty  
St., New York.  
A. D. White Machinery Co., 27-31 South  
Jefferson St., Chicago, Ill.  
C. C. Wormer Machinery Co., Detroit,  
Mich.

**Bicycle Parts—**

American Tube & Stamping Co., Bridge-  
port, Ct.  
Avery Stamping Co., Cleveland, O.  
Billings & Spencer Co., Hartford, Ct.  
Consolidated Mfg. Co., Toledo, O.  
Crosby Co., Buffalo, N. Y.  
Hartford Machine Screw Co., Hartford,  
Ct.  
Indianapolis Drop Forging Co., Indian-  
apolis, Ind.  
John R. Keim Mills, Inc., Buffalo, N. Y.  
Keystone Drop Forge Works, Chester, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
John S. Leng's Son & Co., 33 Murray  
St., New York.  
H. A. Matthews Mfg. Co., Seymour, Ct.  
National Cycle Mfg. Co., Bay City, Mich.  
Parker Wire Goods Co., Worcester, Mass.  
Pittsburgh Screw & Bolt Co., Pittsburgh.  
Richmond Forgings Corporation, Rich-  
mond, Va.  
Standard Welding Co., Cleveland, O.  
Strieby & Foote Co., Newark, N. J.  
Wire Goods Co., Worcester, Mass.  
Worcester Pressed Steel Co., Worcester,  
Mass.

**Bicycle Saddle Tops—**

Graton & Knight Mfg. Co., Worcester,  
Mass.

**Bicycles and Sundries—**

Consolidated Mfg. Co., Toledo, O.  
John S. Leng's Son & Co., 33 Murray  
New York.  
National Cycle Mfg. Co., Bay City, Mich.

**Bicycles, Motor—**

Consolidated Mfg. Co., Toledo, O.

**Bilge Pumps—**

(See Pumps, Ship and Deck.)

**Billets, Open Hearth Steel—**

Allegheny Steel Co., Pittsburgh, Pa.  
American Tube & Stamping Co., Bridge-  
port, Ct.  
Andrews Steel Co., Newport, Ky.

Bethlehem Steel Co., So. Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Follansbee Bros. Co., Pittsburgh, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Tennessee Coal, Iron & R. R. Co., 71  
Broadway, New York.

Alan Wood Iron & Steel Co., 519 Arch  
St., Philadelphia, Pa.

**Billets, Steel—**

Allegheny Steel Co., Pittsburgh, Pa.  
American Tube & Stamping Co., Bridge-  
port, Ct.  
Andrews Steel Co., Newport, Ky.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Follansbee Bros. Co., Pittsburgh, Pa.  
Harrisburg Pipe & Pipe Bending Co.,  
Harrisburg, Pa.  
Inland Steel Co., First National Bank  
Bldg., Chicago, Ill.  
Jones & Laughlin Steel Co., Pittsburgh.  
La Belle Iron Works, Steubenville, O.  
Lackawanna Steel Co., 2 Rector St.,  
New York.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Washburn Wire Co., Philadelphia, Pa.  
Alan Wood Iron & Steel Co., 519 Arch  
St., Philadelphia, Pa.  
Youngstown Sheet & Tube Co., Youngs-  
town, O.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.  
Denman & Davis, 85-89 Lafayette St., N. Y.  
Dilworth, Gilbert & Towne, Inc., 35-37  
Wooster St., New York.  
J. H. Hillman & Son, Pittsburgh, Pa.  
C. B. Houston & Co., Girard Bldg.,  
Philadelphia, Pa.  
Jerome Keeley & Co., 421 Chestnut St.,  
Philadelphia, Pa.  
J. Tatnall Lea & Co., 19 So. 12th St.,  
Philadelphia, Pa.  
A. Milne & Co., 1 Broadway, New York.  
Edmund W. Mudge & Co., Pittsburgh,  
Pa.  
North Works, Illinois Steel Co., Chicago,  
Ill.  
F. R. Phillips & Sons Co., Pennsylvania  
Bldg., Philadelphia, Pa.  
Pilling & Crane, Girard Bldg., Philadel-  
phia, Pa.  
Plitt & Co., Real Estate Trust Bldg.,  
Philadelphia, Pa.  
Horace T. Potts, 316-320 N. Third St.,  
Philadelphia, Pa.  
Potts & Wittman, North American Bldg.,  
Philadelphia, Pa.  
Frank Samuel, 15th & Market Sts., Phil-  
adelphia, Pa.  
E. H. Wilson & Co., 112 No. Broad St.,  
Philadelphia, Pa.  
**Billiard Table Bolts and  
Cushions—**  
(See Bolts, Billiard Table.)  
**Binder Twine—**  
(See Twine, Binder.)  
**Binders, Log—**  
E. C. Atkins & Co., Indianapolis, Ind.  
**Binding Chains—**  
(See Chains.)  
**Binding, Oil Cloth—**  
Turner & Stanton Co., Norwich, Ct.  
**Binding, Trunk—**  
J. H. Sessions & Son, Bristol, Ct.

**Binnacles—**

Keuffel & Esser Co., 127 Fulton St., N. Y.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.

**Bins, Coal—**

Interstate Engineering Co., Bedford, O.  
R. Munroe & Sons Corporation, Pittsburgh, Pa.

**Bins, Nail—**

W. J. Clark Co., Salem, O.  
J. D. Warren Mfg. Co., Chicago, Ill.

**Bins, Stock—**

W. J. Clark Co., Salem, O.

**Bins, Storage, Steel—**

Terrell's Equipment Co., Grand Rapids, Mich.

**Bins, Wire—**

Buffalo Wire Works Co., Inc., Buffalo, N. Y.

**Bird Cage Hooks, Springs—**

(See Hooks, Springs.)

**Bird Cages—**

(See Cages, Bird and Animal.)

**Bit and Square Levels—**

(See Levels, Bit and Square.)

**Bit Braces, Gauges, &c.—**

(See Braces, Gauges, &c.)

**Bit Extensions—**

Ford Auger Bit Co., Holyoke, Mass.

**Bit Heading Machines—**

(See Heading Machines, Bit.)

**Bit Stocks, Angle Boring—**

John S. Fray & Co., Bridgeport, Ct.

Millers Falls Co., 23 Warren St., N. Y.

**Bits, Bell Hangers', Electricians'—**

Cleveland Twist Drill Co., Cleveland, O.

Elmore Tool Mfg. Co., Hartford, Ct.

H. H. Mayhew Co., Shelburne Falls, Mass.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., N. Y.

Snell Mfg. Co., Fiskdale, Mass.

Standard Tool Co., Cleveland, O.

James Swan Co., Seymour, Ct.

Whitman & Barnes Mfg. Co., Chicago.

**Bits, Brace and Machine—**

Progressive Mfg. Co., Torrington, Ct.

**Bits, Brace, Boring Machine, &c.—**

(See Augers and Bits.)

**Bits, Bridle—**

Fernald Mfg. Co., North East, Pa.

Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.

Kilborn & Bishop Co., New Haven, Ct.

North & Judd Mfg. Co., New Britain, Ct.

**Bits, Broom Handle—**

H. H. Mayhew Co., Shelburne Falls, Mass.

**Bits, Countersink—**

Cleveland Twist Drill Co., Cleveland, O.

Kilborn & Bishop Co., New Haven, Ct.

H. H. Mayhew Co., Shelburne Falls, Mass.

Job T. Pugh, 31st and Ludlow Sts., Philadelphia, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., N. Y.

Snell Mfg. Co., Fiskdale, Mass.

Standard Tool Co., Cleveland, O.

Whitman & Barnes Mfg. Co., Chicago.

**Bits, Dowel—**

Cleveland Twist Drill Co., Cleveland, O.

Ford Auger Bit Co., Holyoke, Mass.

Russell Jennings Mfg. Co., Chester, Ct.

James Swan Co., Seymour, Ct.

**Bits, Expansive—**

John H. Graham & Co., 113 Chambers St., New York.

C. E. Jennings & Co., 42 Murray St., N.Y.

Kilborn & Bishop Co., New Haven, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., N. Y.

James Swan Co., Seymour, Ct.

**Bits, Gimlet—**

(See Gimlets and Gimlet Bits.)

**Bits, Hollow Chisel—**

Irwin Auger Bit Co., Wilmington, O.

Job T. Pugh, 31st and Ludlow Sts., Philadelphia, Pa.

Wessman Tool Co., Rockford, Ill.

**Bits, Hub Boring—**

Irwin Auger Bit Co., Wilmington, O.

Standard Tool Co., Cleveland, O.

**Bits, Machine, Wood—**

Cleveland Twist Drill Co., Cleveland, O.

Ford Auger Bit Co., Holyoke, Mass.

Oliver Machinery Co., Grand Rapids, Mich.

Job T. Pugh, 31st and Ludlow Sts., Philadelphia, Pa.

Standard Tool Co., Cleveland, O.

James Swan Co., Seymour, Ct.

Wessman Tool Co., Rockford, Ill.

Whitman & Barnes Mfg. Co., Chicago.

**Bits, Mortising—**

Grand Rapids Hardware Co., Grand Rapids, Mich.

**Bits, Pod—**

H. H. Mayhew Co., Shelburne Falls, Mass.

Snell Mfg. Co., Fiskdale, Mass.

**Bits, Screw Driver—**

Elmore Tool Mfg. Co., Hartford, Ct.

Ford Auger Bit Co., Holyoke, Mass.

John H. Graham & Co., 113 Chambers St., New York.

Irwin Auger Bit Co., Wilmington, O.

Keystone Drop Forge Works, Chester, Pa.

Kilborn & Bishop Co., New Haven, Ct.

H. H. Mayhew Co., Shelburne Falls, Mass.

Millers Falls Co., 23 Warren St., N. Y.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., N. Y.

Snell Mfg. Co., Fiskdale, Mass.

Standard Tool Co., Cleveland, O.

Stanley Rule & Level Co., New Britain, Ct.

James Swan Co., Seymour, Ct.

Tuck Mfg. Co., Brockton, Mass.

Whitman & Barnes Mfg. Co., Chicago.

**Bits, Square Boring—**

(See Bits, Hollow Chisel.)

**Bits, Sucker Rod—**

H. H. Mayhew Co., Shelburne Falls, Mass.

**Bits, Tree Tapping—**

Ford Auger Bit Co., Holyoke, Mass.

H. H. Mayhew Co., Shelburne Falls, Mass.

James Swan Co., Seymour, Ct.

**Bits, Wood Boring Brace—**

(See Drills, Wood Boring Brace.)

**Black Plate for Tinning—**

(See Plate, Black for Tinning.)

**Blacksmiths' Bellows, Buffers, &c.—**

(See Bellows, Buffers, &c.)

**Blacksmiths' Placers—**

(See Placers.)

**Blacksmiths' Tools—**

Acme Machinery Co., Cleveland, O.  
Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
Badger State Machine Co., Janesville, Wis.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Buffalo Forge Co., Buffalo, N. Y.  
Heller Bros. Co., Newark, N. J.  
Hilles & Jones Co., Wilmington, Del.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Pratt & Whitney Co., Hartford, Ct.  
E. F. Reece Co., Greenfield, Mass.  
Wiley & Russell Mfg. Co., Greenfield, Mass.

**Blades and Handles, Extension Knife—**

Dame, Stoddard & Co., Boston, Mass.  
**Blades, Butcher Saw—**  
E. C. Atkins & Co., Indianapolis, Ind.  
John Chastillon & Sons, 85 Cliff St., N. Y.  
Henry Diston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
Massachusetts Saw Works, Chicopee, Mass.  
National Saw Co., Newark, N. J.  
Rex File & Saw Co., Newcomerstown, O.  
Simonds Mfg. Co., Fitchburg, Mass.  
H. G. Thompson & Son Co., New Haven, Ct.

**Blades, Cigar—**

National Saw Co., Newark, N. J.

**Blades, Doctor—**

Henry Diston & Sons, Philadelphia, Pa.  
National Saw Co., Newark, N. J.

**Blades, Fan Blower, Steel—**

Avery Stamping Co., Cleveland, O.  
Worcester Pressed Steel Co., Worcester, Mass.

**Blades, Gin Roller—**

Henry Diston & Sons, Philadelphia, Pa.

**Blades, Hack Saw—**

Goodell-Pratt Co., Greenfield, Mass.  
Rex File & Saw Co., Newcomerstown, O.  
(See also Saws, Hack.)

**Blades, Metal Shear—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
E. C. Atkins & Co., Indianapolis, Ind.  
Badger State Machine Co., Janesville, Wis.  
E. W. Bliss Co., Brooklyn, N. Y.  
Cincinnati Punch & Shear Co., Cincinnati, O.  
Cleveland Punch & Shear Works Co., Cleveland, O.  
Henry Diston & Sons, Philadelphia, Pa.  
Ferracute Machine Co., Bridgeton, N. J.  
Heppenstall Forge & Knife Co., Pittsburgh, Pa.  
Hilles & Jones Co., Wilmington, Del.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
George A. Ohl & Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.  
L. & I. J. White Co., Buffalo, N. Y.

**Blades, Saw, Stone and Marble—**

E. C. Atkins & Co., Indianapolis, Ind.  
Carnegie Steel Co., Pittsburgh, Pa.

**Blades, Screw Slotter—**

Simonds Mfg. Co., Fitchburg, Mass.

**Blanket Hardware—**

North & Judd Mfg. Co., New Britain, Ct.

**Blanking and Forming.**

**Sheet Metal—**

(See Stamping, Sheet Metal.)

**Blanks, Cup, Aluminum, Brass, Bronze, Copper,**

**German Silver—**

Scovill Mfg. Co., Waterbury, Ct.

**Blanks, Cutter—**

(See Cutter Blanks, Milling.)

**Blanks, Gear—**

Fawcett Machine Co., Pittsburgh, Pa.  
A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.  
General Drop Forge Co., Buffalo, N. Y.  
Kilborn & Bishop Co., New Haven, Ct.  
Mesta Machine Co., Pittsburgh, Pa.  
Pennsylvania Forge Co., Philadelphia, Pa.  
Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia.  
Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Tindell-Morris Co., Eddystone, Pa.  
W. & S. Mfg. Co., Worcester, Mass.  
Worcester Pressed Steel Co., Worcester, Mass.

**Blanks, Gear, Steel—**

Fawcett Machine Co., Pittsburgh, Pa.  
General Drop Forge Co., Buffalo, N. Y.  
Lebanon Steel Casting Co., Lebanon, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Tropenas Steel Co., New Castle, Del.

**Blanks, Pinion—**

General Drop Forge Co., Buffalo, N. Y.  
Pennsylvania Forge Co., Philadelphia, Pa.  
Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia.

**Blanks, Saw Blade—**

Henry Diston & Sons, Philadelphia, Pa.

**Blanks, Snap Gauge—**

Billings & Spencer Co., Hartford, Ct.  
J. H. Williams & Co., Brooklyn, N. Y.

**Blanks, Sprocket—**

Otto Konigslow Mfg. Co., Cleveland, O.  
W. & S. Mfg. Co., Worcester, Mass.

**Blanks, Thumb Nut—**

Billings & Spencer Co., Hartford, Ct.  
Keystone Drop Forge Works, Chester, Pa.  
Whitman & Barnes Mfg. Co., Chicago.  
J. H. Williams & Co., Brooklyn, N. Y.

**Blanks, Thumb Screw—**

Billings & Spencer Co., Hartford, Ct.  
General Drop Forge Co., Buffalo, N. Y.  
Keystone Drop Forge Works, Chester, Pa.  
Whitman & Barnes Mfg. Co., Chicago.  
J. H. Williams & Co., Brooklyn, N. Y.

**Blast Furnace Casting Machines—**

(See Casting Machines, Blast Furnace.)

**Blast Furnace Machinery—**

Atlas Car & Mfg. Co., Cleveland, O.  
Mackintosh, Hemphill & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Mesta Machine Co., Pittsburgh, Pa.  
Pennsylvania Engineering Works, New Castle, Pa.  
United Engineering & Foundry Co., Pittsburgh, Pa.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**Blast Gates—**

(See Gates, Blast.)

**Blind Adjusters, Fasteners, Hinges—**

(See Adjusters, Fasteners, Hinges.)

**Blind Awning Fixtures—**

(See Awning Fixtures, Blind.)

**Blind Hardware—**

(See Hinges, Fasteners, Blind.)

**Blind Workers—**

(See Workers, Shutter.)

**Block Scrapers, Butchers'—**

(See Scrapers, Butchers' Block.)

**Blocking, Adjustable—**

Wm. G. Le Count, East Norwalk, Ct.

**Blocks, Blast Furnace—**

Cyrus Borgner Co., 23d St., above Race, Philadelphia, Pa.

M. D. Valentine &amp; Bro. Co., Woodbridge, N. J.

**Blocks, Chain—**

(See Blocks, Hoisting.)

**Blocks, Chain, Electric—**

Northern Engineering Works, Detroit, Mich.

**Blocks, Contractors'—**

Boston &amp; Lockport Block Co., East Boston, Mass.

**Blocks, Cresting—**

(See Finales and Vanes, Metal.)

**Blocks, Deck and Snatch—**

American Well Works, Aurora, Ill.

Boston &amp; Lockport Block Co., East Boston, Mass.

Broderick &amp; Bascom Rope Co., St. Louis, Mo.

Thomas Laughlin Co., Portland, Me.

A. Leschen &amp; Sons Rope Co., St. Louis, Mo.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

W. W. Patterson Co., Pittsburgh, Pa.

W. &amp; J. Tiebout, 118 Chambers St., N. Y.

Union Hardware Co., Torrington, Ct.

Wilcox, Crittenden &amp; Co., Inc., Middletown, Ct.

**Blocks, Differential Pulley—**

Boston &amp; Lockport Block Co., East Boston, Mass.

Broderick &amp; Bascom Rope Co., St. Louis, Mo.

Cushnol &amp; Moore Mfg. Co., Cleveland, O.

E. Harrington, Son &amp; Co., Inc., Philadelphia, Pa.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

Schuchardt &amp; Schutte, 90 West St., N. Y.

Scully Steel &amp; Iron Co., 69 N. Halsted St., Chicago, Ill.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Blocks, Drill—**

Whitman &amp; Barnes Mfg. Co., Chicago, Ill.

**Blocks, Floor Broom—**

Piqua Handle &amp; Mfg. Co., Piqua, O.

**Blocks, Gin—**

Boston &amp; Lockport Block Co., East Boston, Mass.

**Blocks, Granite Cutters'—**

Winding—

Trow &amp; Hilden, Barre, Vt.

**Blocks, Hay Fall—**

(See Blocks, Tackle.)

**Blocks, Hoisting—**

American Well Works, Aurora, Ill.

Boston &amp; Lockport Block Co., East Boston, Mass.

Broderick &amp; Bascom Rope Co., St. Louis, Mo.

C. W. Hunt Co., West New Brighton, N. Y.

Irving Mfg. &amp; Tool Co., 157 Chambers St., New York.

Thomas Laughlin Co., Portland, Me.

A. Leschen &amp; Sons Rope Co., St. Louis, Mo.

W. W. Patterson Co., Pittsburgh, Pa.

Schuchardt &amp; Schutte, 90 West St., N. Y.

Union Hardware Co., Torrington, Ct.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Blocks, Iron—**

Boston &amp; Lockport Block Co., East Boston, Mass.

**Blocks, Lineman's—**

Mathies Klein &amp; Sons, 87-89 W. Van Buren St., Chicago, Ill.

**Blocks, Locomotive—**

Broderick &amp; Bascom Rope Co., St. Louis, Mo.

**Blocks, Log Loading—**

Boston &amp; Lockport Block Co., East Boston, Mass.

Broderick &amp; Bascom Rope Co., St. Louis, Mo.

A. Leschen &amp; Sons Rope Co., St. Louis, Mo.

**Blocks, Pillow—**

H. W. Caldwell &amp; Son Co., Western Ave and 17th St., Chicago, Ill.

W. E. Caldwell Co., Inc., Louisville, Ky.

Geo. V. Cresson Co., 18th St. &amp; Allegheny Ave., Philadelphia, Pa.

Dodge Mfg. Co., Mishawaka, Ind.

Jones &amp; Laughlin Steel Co., Pittsburgh, Pa.

W. A. Jones Foundry &amp; Machine Co., 142-164 W. North Ave., Chicago, Ill.

Link-Belt Co., Philadelphia, Pa.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.

Poole Engineering &amp; Machine Co., Baltimore, Md.

Robins Conveying Belt Co., 17-22 Park Row, New York.

T. B. Wood's Sons Co., Chambersburg, Pa.

**Blocks, Snatch—**

(See Blocks, Deck and Snatch.)

**Blocks, Steel—**

Boston &amp; Lockport Block Co., East Boston, Mass.

Broderick &amp; Bascom Rope Co., St. Louis, Mo.

Thomas Laughlin Co., Portland, Me.

A. Leschen &amp; Sons Rope Co., St. Louis, Mo.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

W. W. Patterson Co., Pittsburgh, Pa.

Schuchardt &amp; Schutte, 90 West St., N. Y.

Union Hardware Co., Torrington, Ct.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Blocks, Swage—**

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

B. B. Noyes &amp; Co., Greenfield, Mass.

Wiley &amp; Russell Mfg. Co., Greenfield, Mass.

**Blocks, Tackle—**

American Well Works, Aurora, Ill.

Boston &amp; Lockport Block Co., East Boston, Mass.

Broderick & Bascom Rope Co., St. Louis.  
 Davis Bros. Co., Poughkeepsie, N. Y.  
 Thomas Laughlin Co., Portland, Me.  
 A. Leschen & Sons Rope Co., St. Louis.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 W. W. Patterson Co., Pittsburgh, Pa.  
 Schuchardt & Schutte, 90 West St., N. Y.  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
 Union Hardware Co., Torrington, Ct.  
 Wilcox, Crittenden & Co., Inc., Middletown, Ct.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Blocks, Tackle, Safety—**  
 Boston & Lockport Block Co., East Boston, Mass.

**Blocks, Vessel—**  
 Boston & Lockport Block Co., East Boston, Mass.

**Blocks, Wire Rope—**  
 American Well Works, Aurora, Ill.  
 Boston & Lockport Block Co., East Boston, Mass.

Broderick & Bascom Rope Co., St. Louis.  
 Thomas Laughlin Co., Portland, Me.  
 A. Leschen & Sons Rope Co., St. Louis, Mo.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

W. W. Patterson Co., Pittsburgh, Pa.  
 Union Hardware Co., Torrington, Ct.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Blocks, Wood Tackle—**  
 (See Blocks, Tackle.)

**Blocks, Yacht—**  
 Boston & Lockport Block Co., East Boston, Mass.

**Blooming Mills—**  
 A. Garrison Foundry Co., Pittsburgh, Pa.  
 Lewis Foundry & Machine Co., Groveton, Pa.

Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Westla Machine Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.  
 Pennsylvania Engineering Works, New Castle, Pa.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia.

United Engineering & Foundry Co., Pittsburgh, Pa.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Blooms, Charcoal—**  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Lackawanna Steel Co., 2 Rector St., New York.

**MERCHANTS.**  
 J. H. Hillman & Son, Pittsburgh, Pa.

Horace T. Potts & Co., 316-320 N. Third St., Philadelphia, Pa.

Wheeler, Milfin & Co., Fidelity Bldg., Philadelphia, Pa.

**Blow Off Tanks—**  
 E. Keeler Co., Williamsport, Pa.

B. Seafie & Sons Co., Pittsburgh, Pa.  
 Tudor Boiler Mfg. Co., Cincinnati, O.

**Blow Pipes, Alcohol and Gasoline—**

Davis-Bournoville Co., 90 West St., N. Y.  
 Turner Brass Works, Sycamore, Ill.

(See also Torches, Welding and Cutting.)

**Blow Pipes, Dental—**  
 Turner Brass Works, Sycamore, Ill.

**Blow Pipes, Jewelers—**  
 Davis-Bournoville Co., 90 West St., N. Y.

**Blow Pipes, Oxy-Acetylene—**

Beltzer-Delcampe Welding Co., Bridgeport, Ct.

Davis-Bournoville Co., 90 West St., N. Y.

**Blower Stands—**  
 (See Stands, Blower.)

**Blowers—**  
 American Blower Co., Detroit, Mich.

Boston Blower Co., Hyde Park, Mass.

Buffalo Forge Co., Buffalo, N. Y.

Champion Blower & Forge Co., Lancaster, Pa.

Connersville Blower Co., Connersville, Ind.

De Laval Steam Turbine Co., Trenton, N. J.

Exeter Machine Works, Exeter, N. H.

Green Fuel Economizer Co., Matteawan, N. Y.

McClave-Brooks Co., Scranton, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Monarch Engineering & Mfg. Co., Baltimore, Md.

Niles-Bement-Pond Co., 111 Broadway, New York.

J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.

Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

B. F. Sturtevant Co., Boston, Mass.

**MERCHANTS.**  
 Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.

J. Gilmour, Bennett Bldg., New York.

Hannan-Fulton Co., Springfield, Mass.

Edgar M. Moore & Co., Pittsburgh, Pa.

S. Obermayer Co., Cincinnati, O.

Perkins & Frecker, 135 Liberty St., N. Y.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 No. Halsted St., Chicago, Ill.

Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.

Jacob Ullman, Buffalo, N. Y.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

**Blowers, Blacksmith's Electric—**  
 Buffalo Forge Co., Buffalo, N. Y.

**Blowers, Electric—**  
 American Blower Co., Detroit, Mich.

Bayley Mfg. Co., Milwaukee, Wis.

Boston Blower Co., Hyde Park, Mass.

Buffalo Forge Co., Buffalo, N. Y.

Champion Blower & Forge Co., Lancaster, Pa.

Jas. Clark, Jr., Electric Co., Louisville, Ky.

General Electric Co., Schenectady, N. Y.

Green Fuel Economizer Co., Matteawan, N. Y.

B. F. Sturtevant Co., Boston, Mass.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Blowers, Pressure—**  
 American Blower Co., Detroit, Mich.

American Gas Furnace Co., 23 John St., New York.

Bayley Mfg. Co., Milwaukee, Wis.



- Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Boston Blower Co., Hyde Park, Mass.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Champion Blower & Forge Co., Lancaster, Pa.  
 Connersville Blower Co., Connersville, Ind.  
 De Laval Steam Turbine Co., Trenton, N. J.  
 Exeter Machine Works, Exeter, N. H.  
 Green Fuel Economizer Co., Matteawan, N. Y.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 S. Obermayer Co., Cincinnati, O.  
 B. F. Sturtevant Co., Boston, Mass.  
 U. S. Gas Furnace Co., Providence, R. I.
- Blowers, Steam Jet—**  
 Eynon-Evans Mfg. Co., 1517 Clearfield St., Philadelphia, Pa.  
 McClave-Brooks Co., Scranton, Pa.
- Blueprint Machines—**  
 Keuffel & Esser Co., 127 Fulton St., N. Y.  
 Youngstown Car Mfg. Co., Youngstown, O.  
 (See also Printing Machines.)
- Board Rules—**  
 (See Rules, Board.)
- Boards, Corner—**  
 (See Architectural Sheet Metal Work.)
- Boards, Drain, Sink—**  
 Humphreys Mfg. Co., Mansfield, O.
- Boards, Drawing—**  
 Keuffel & Esser Co., 127 Fulton St., N. Y.  
 Morgan Construction Co., Worcester, Mass.
- Boards, Glass—**  
 Lufkin Rule Co., Saginaw, Mich.
- Boards, Shovel—**  
 Hayes Pump & Planter Co., Galva, Ill.
- Boat Anchors, Hooks, &c.—**  
 (See Anchors, Hooks, &c.)
- Boat Houses, Portable—**  
 (See Houses, Portable.)
- Bobs, Plumb—**  
 Bergman Tool Mfg. Co., Buffalo, N. Y.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Henry Disston & Sons, Philadelphia, Pa.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Keuffel & Esser Co., 127 Fulton St., New York.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 Stanley Rule & Level Co., New Britain, Ct.  
 L. S. Starrett Co., Athol, Mass.
- Bogie Rollers—**  
 Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.
- Boiler Brace Iron—**  
 (See Iron, Boiler Brace.)
- Boiler Braces, Pressed—**  
 Lukens Iron & Steel Co., Coatesville, Pa.
- Boiler Cleaners—**  
 (See Cleaners, Flue.)
- Boiler Compounds—**  
 (See Compounds, Boiler.)
- Boiler Coverings—**  
 (See Coverings, Boiler and Pipe.)
- Boiler Feeders, Automatic—**  
 Lunkenheimer Co., Cincinnati, O.  
 Morehead Mfg. Co., Detroit, Mich.
- Boiler Feeders, Low Pressure—**  
 F. E. Myers & Bros., Ashland, O.  
 Walworth Mfg. Co., Boston, Mass.
- Boiler Fronts—**  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 E. Keeler Co., Williamsport, Pa.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.  
 Walworth Mfg. Co., Boston, Mass.
- Boiler Furnaces—**  
 (See Furnaces.)
- Boiler Handles—**  
 (See Tinnners' Trimmings.)
- Boiler Heads—**  
 (See Heads, Flanged and Dished Boiler.)
- Boiler Makers' Tools—**  
 Badger State Machine Co., Janesville, Wis.  
 Bertsch & Co., Cambridge City, Ind.  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Cincinnati Punch & Shear Co., Cincinnati, O.  
 Richard Dudgeon, 24-26 Columbia St., New York.  
 Gem Mfg. Co., Pittsburgh, Pa.  
 A. L. Henderer's Sons, Wilmington, Del.  
 Hilles & Jones Co., Wilmington, Del.  
 J. J. McCabe, 14 Day St., New York.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 New Doty Mfg. Co., Janesville, Wis.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Pratt & Whitney Co., Hartford, Ct.  
 Thomas Prosser & Son, 25 Platt St., N. Y.  
 Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.
- MERCHANTS.**  
 Hill, Clarke & Co., Boston, Mass.  
 Marshall & Huchart Machinery Co., 62-64 So. Canal St., Chicago, Ill.  
 Motch & Merryweather Machinery Co., Cleveland, O.  
 Prentiss Tool & Supply Co., 115 Liberty St., New York.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.  
 Wickes Bros., Saginaw, Mich.  
 C. C. Wormer Machinery Co., Detroit, Mich.
- Boiler Makers' Tools, Kitchen—**  
 E. W. Bliss Co., Brooklyn, N. Y.
- Boilers, Automobile—**  
 Janney, Steinmetz & Co., Philadelphia.  
 Wm. B. Scaife & Sons Co., Pittsburgh, Pa.
- Boilers, Egg—**  
 (See Household Articles, Wire.)
- Boilers, House, Copper—**  
 E. B. Badger & Sons Co., Boston, Mass.
- Boilers, House, Galvanized—**  
 Wm. B. Scaife & Sons Co., Pittsburgh.
- Boilers, Portable—**  
 Harrison Safety Boiler Works, 3194 N. 17th St., Philadelphia, Pa.  
 E. Keeler Co., Williamsport, Pa.

**Boilers, Seamless Drawn Steel House—**  
 Pressed Steel Tank Co., Milwaukee, Wis.

**Boilers, Seamless Welded Fire Engine—**  
 American Welding Co., Carbondale, Pa.

**Boilers, Steam—**  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.

Babcock & Wilcox Co., 85 Liberty St., New York.

Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.

Exeter Machine Works, Exeter, N. H.

Franklin Boiler Works Co., Troy, N. Y.

S. Freeman & Sons Mfg. Co., Racine, Wis.

Harrison Safety Boiler Works, 3194 N. 15th St., Philadelphia, Pa.

Heine Safety Boiler Co., St. Louis, Mo.

E. Keeler Co., Williamsport, Pa.

Lidgerwood Mfg. Co., 96 Liberty St., New York.

Meehan Boiler & Construction Co., Lowellville, O.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

R. S. Newbold & Son Co., Norristown, Pa.

Newport News Ship Building & Dry Dock Co., Newport News, Va.

Parker Boiler Co., Pennsylvania Bldg., Philadelphia, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

Southern Engine & Boiler Works, Jackson, Tenn.

Tudor Boiler Mfg. Co., Cincinnati, O.

Vilter Mfg. Co., Milwaukee, Wis.

Robert Wetherill & Co., Chester, Pa.

Wickes Bros., Saginaw, Mich.

**MERCHANTS.**

W. R. Beatty Machinery & Equipment Co., Pittsburgh, Pa.

Charles Behlen, 72 Trinity Pl., New York.

Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.

Cleveland Belting & Machinery Co., Cleveland, O.

Thomas P. Conard & Co., 119 S. 4th St., Philadelphia, Pa.

Wm. P. Davis Machine Co., Rochester, N. Y.

Barclay M. Everson, Pittsburgh, Pa.

Hannan-Finton Co., Springfield, Mass.

McDowell & Co., Allegheny, Pa.

MacGovern, Archer & Co., 114 Liberty St., New York.

W. G. McKenney & Co., Pittsburgh, Pa.

Edgar M. Moore & Co., Pittsburgh, Pa.

Norton Machinery Co., Cincinnati, O.

Pfannmueller Engineering Co., First National Bank Bldg., Chicago, Ill.

Power Equipment Co., Fisher Bldg., Chicago, Ill.

A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

L. F. Severt's Sons, Inc., 437-441 No. 3d St., Philadelphia, Pa.

Shook & Fletcher, Birmingham, Ala.

Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.

Jacob Ullman, Buffalo, N. Y.

Warren City Tank & Boiler Co., Warren, O.

C. C. Wormer Machine Co., Detroit, Mich.

Yearsley & Levene, 305 N. 3d St., Philadelphia, Pa.

**Boilers, Steam and Hot Water—**

Exeter Machine Works, Exeter, N. H.

S. Freeman & Sons Mfg. Co., Racine, Wis.

E. Keeler Co., Williamsport, Pa.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

Wm. B. Scaife & Sons Co., Pittsburgh.

Tudor Boiler Mfg. Co., Cincinnati, O.

**Boilers, Tubular Heating—**

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

Tudor Boiler Mfg. Co., Cincinnati, O.

**Boilers, Vegetable—**  
 (See Kitchen Articles, Wire—)

**Boilers, Wash—**

E. B. Badger & Sons Co., Boston, Mass.

Dover Stamping & Mfg. Co., Cambridge, Mass.

**Bolster Plates—**  
 (See Plates, Bolster.)

**Bolsters, Cast Steel Car Trucks—**

American Steel Foundries, 42 Broadway, New York.

**Bolt and Nut Machinery—**

Acme Machinery Co., Cleveland, O.

Ajax Mfg. Co., Cleveland, O.

Blake & Johnson Co., Waterbury, Ct.

Hartford Machine Screw Co., Hartford, Ct.

Landis Machine Co., Waynesboro, Pa.

National Machinery Co., Tiffin, O.

Niles-Bement-Pond Co., 111 Broadway, N.Y.

Pawtucket Mfg. Co., Pawtucket, R. I.

Pratt & Whitney Co., Hartford, Ct.

E. F. Reece Co., Greenfield, Mass.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

Webster & Perka Tool Co., Springfield, O.

Wells Bros. Co., Greenfield, Mass.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.

Hill, Clarke & Co., Boston, Mass.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Marshall & Hushart Machinery Co., 62-64 So. Canal St., Chicago, Ill.

McDowell, Stocker & Co., 59 S. Canal St., Chicago, Ill.

Motel & Merryweather Machinery Co., Cleveland, O.

Prentiss Tool & Supply Co., 115 Liberty St., New York.

Scully Steel & Iron Co., 69 No. Halsted St., Chicago, Ill.

Frank Toomey, 127-131 N. Third St., Philadelphia, Pa.

Vandyke, Churchill Co., 8 Dey St., N. Y.

A. O. Walworth & Co., 143-147 Clinton St., Chicago, Ill.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

- Bolt Copper, Cutters, &c.—**  
(See Copper, Cutters, &c.)
- Bolt Ends—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
Clark Bros. Bolt Co., Milldale, Ct.  
Cleveland City Forge & Iron Co., Cleveland, O.  
Samuel Hall's Sons, 229-233 W. 10th St., New York.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
M. Lanz & Sons, Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.  
Pittsburgh Mfg. Co., Pittsburgh, Pa.  
Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Upson Nut Co., Cleveland, O.
- Bolt Head Milling Machines—**  
(See Nut and Bolt Head Milling Machines.)
- Bolt Head Trimmers—**  
(See Trimmers, Bolt Head.)
- Bolt Iron—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.
- Bolt Kegs—**  
(See Kegs, Nail, Bolt, Nut, &c.)
- Bolt Machinery, Stay—**  
E. Harrington, Son & Co., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Bolt Machinery, Stove and Carriage—**  
Acme Machinery Co., Cleveland, O.  
Blake & Johnson Co., Waterbury, Ct.  
Landis Machine Co., Waynesboro, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
E. J. Manville Machine Co., Waterbury, Ct.  
National Machinery Co., Tiffin, O.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.
- Bolt Pointing Machines—**  
Acme Machinery Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
National Machinery Co., Tiffin, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.
- Bolt Shields, Expansion—**  
(See Shields, Expansion Bolt.)
- Bolt Turning Machines, Taper—**  
E. Harrington, Son & Co., Philadelphia, Pa.
- Bolt Wire—**  
(See Wire, Bolt.)
- Bolts, Agricultural—**  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.
- Clark Bros. Bolt Co., Milldale, Ct.  
Detroit Screw Works, Detroit, Mich.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
M. Lanz & Sons, Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Upson Nut Co., Cleveland, O.
- Bolts, Anchor or Toggle—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Isaac Church, South Norwalk, Ct.  
Diamond Expansion Bolt Co., 90 West St., New York.  
Fort Pitt Forge Co., Pittsburgh, Pa.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.
- Bolts, Automobile—**  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- Bolts, Awning Expansion—**  
Star Expansion Bolt Co., 147-149 Cedar St., New York.
- Bolts, Barn Door—**  
Arcade Mfg. Co., Freeport, Ill.  
M. Lanz & Sons, Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.
- Bolts, Barrel and Wrought Square—**  
(See Bolts, Door.)
- Bolts, Bicycle—**  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- Bolts, Billiard Table—**  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.
- Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
Shelton Co., Shelton, Ct.
- Bolts, Blank—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
Clark Bros. Bolt Co., Milldale, Ct.  
Cleveland City Forge & Iron Co., Cleveland, O.  
Detroit Screw Works, Detroit, Mich.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Samuel Hall's Sons, 229-233 W. 10th St., New York.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.
- Bolts, Blank—**  
M. Lanz & Sons, Pittsburgh, Pa.  
National Bolt & Nut Company, Pittsburgh, Pa.

**New Castle Forge & Bolt Co.,** New Castle, Pa.

**Oliver Iron & Steel Co.,** Pittsburgh, Pa.

**Pawtucket Mfg. Co.,** Pawtucket, R. I.

**Pittsburgh Mfg. Co.,** Pittsburgh, Pa.

**Pittsburgh Screw & Bolt Co.,** Pittsburgh, Pa.

**Republic Iron & Steel Co.,** Pittsburgh, Pa.

**Rhode Island Tool Co.,** Providence, R. I.

**Russell, Burdall & Ward Bolt & Nut Co.,** Port Chester, N. Y.

**Upson Nut Co.,** Cleveland, O.

**Bolts, Boiler Patch—**

**American Iron & Steel Mfg. Co.,** Lebanon, Pa.

**Anchor Bolt & Nut Co.,** Poughkeepsie, N. Y.

**Chicago Screw Co.,** 2 No. Canal St., Chicago, Ill.

**Detroit Screw Works,** Detroit, Mich.

**Samuel Hall's Sons,** 229-233 W. 10th St., New York.

**Hartford Machine Screw Co.,** Hartford, Ct.

**Wm. H. Haskell Mfg. Co.,** Pawtucket, R. I.

**National Bolt & Nut Co.,** Pittsburgh, Pa.

**Pawtucket Mfg. Co.,** Pawtucket, R. I.

**Pittsburgh Screw & Bolt Co.,** Pittsburgh, Pa.

**Worcester Machine Screw Co.,** Worcester, Mass.

**Bolts, Boiler Stay—**

**American Iron & Steel Mfg. Co.,** Lebanon, Pa.

**Anchor Bolt & Nut Co.,** Poughkeepsie, N. Y.

**Sam'l Hall's Sons,** 229-233 West 10th St., New York.

**Wm. H. Haskell Mfg. Co.,** Pawtucket, R. I.

**M. Lenz & Sons,** Pittsburgh, Pa.

**Lockhart Iron & Steel Co.,** Pittsburgh, Pa.

**National Bolt & Nut Co.,** Pittsburgh, Pa.

**Oliver Iron & Steel Co.,** Pittsburgh, Pa.

**Pittsburgh Mfg. Co.,** Pittsburgh, Pa.

**Pittsburgh Screw & Bolt Co.,** Pittsburgh, Pa.

**Republic Iron & Steel Co.,** Pittsburgh, Pa.

**Bolts, Book Case—**

**Reading Hardware Co.,** Reading, Pa.

**Bolts, Bottom Spring—**

(See Bolts, Door.)

**Bolts, Brass and Bronze—**

**American Iron & Steel Mfg. Co.,** Lebanon, Pa.

**Clark Bros. Bolt Co.,** Milldale, Ct.

**Detroit Screw Works,** Detroit, Mich.

**Eynon-Evans Mfg. Co.,** 1507 Clearfield St., Philadelphia, Pa.

**Samuel Hall's Sons,** 229-233 W. 10th St., New York.

**Hartford Machine Screw Co.,** Hartford, Ct.

**Wm. H. Haskell Mfg. Co.,** Pawtucket, R. I.

**U. T. Hungerford Brass & Copper Co.,** 497-505 Pearl St., New York.

**Kilborn & Bishop Co.,** New Haven, Ct.

**National-Acme Mfg. Co.,** Cleveland, O.

**Pawtucket Mfg. Co.,** Pawtucket, R. I.

**Phosphor Bronze Smelting Co.,** 2200 Washington Ave., Philadelphia, Pa.

**Russell, Burdall & Ward Bolt & Nut Co.,** Port Chester, N. Y.

**Steward & Romaine Mfg. Co.,** Philadelphia, Pa.

**W. & J. Tiebout,** 118 Chambers St., N. Y.

**Bolts, Bridge and Roof—**

**American Iron & Steel Mfg. Co.,** Lebanon, Pa.

**Anchor Bolt & Nut Co.,** Poughkeepsie, N. Y.

**Baltimore Bridge Co.,** Baltimore, Md.

**Berlin Construction Co.,** Berlin, Ct.

**Carnegie Steel Co.,** Pittsburgh, Pa.

**Fort Pitt Forge Co.,** Pittsburgh, Pa.

**Wm. H. Haskell Mfg. Co.,** Pawtucket, R. I.

**M. Lenz & Sons,** Pittsburgh, Pa.

**National Bolt & Nut Co.,** Pittsburgh, Pa.

**New Castle Forge & Bolt Co.,** New Castle, Pa.

**Oliver Iron & Steel Co.,** Pittsburgh, Pa.

**Pawtucket Mfg. Co.,** Pawtucket, R. I.

**Pittsburgh Forge & Iron Co.,** Pittsburgh, Pa.

**Pittsburgh Mfg. Co.,** Pittsburgh, Pa.

**Pittsburgh Screw & Bolt Co.,** Pittsburgh, Pa.

**Republic Iron & Steel Co.,** Pittsburgh, Pa.

**Russell, Burdall & Ward Bolt & Nut Co.,** Port Chester, N. Y.

**Lewis F. Shoemaker & Co.,** Harrison Bldg., Philadelphia, Pa.

**Upson Nut Co.,** Cleveland, O.

**Bolts, Button Head—**

(See Bolts, Special.)

**Bolts, Cabinet—**

(See Screws, Bed.)

**Bolts, Car—**

**National Bolt & Nut Co.,** Pittsburgh, Pa.

**Bolts, Carriage—**

**American Iron & Steel Mfg. Co.,** Lebanon, Pa.

**Anchor Bolt & Nut Co.,** Poughkeepsie, N. Y.

**Atlas Bolt & Screw Co.,** Cleveland, O.

**Atlas Car & Mfg. Co.,** Cleveland, O.

**Clark Bros. Bolt Co.,** Milldale, Ct.

**Falls Rivet & Machine Co.,** Cuyahoga Falls, O.

**Garland Nut & Rivet Co.,** Pittsburgh, Pa.

**Graham Nut Co.,** Pittsburgh, Pa.

**M. Lenz & Sons,** Pittsburgh, Pa.

**McCabe Hanger Mfg. Co.,** 425-427 W. 25th St., New York.

**Franklin Moore Co.,** Winsted, Ct.

**National Bolt & Nut Co.,** Pittsburgh, Pa.

**New Castle Forge & Bolt Co.,** New Castle, Pa.

**Oliver Iron & Steel Co.,** Pittsburgh, Pa.

**Peck, Stow & Wilcox Co.,** 27 Murray St., New York.

**Republic Iron & Steel Co.,** Pittsburgh, Pa.

**Russell, Burdall & Ward Bolt & Nut Co.,** Port Chester, N. Y.

**Shelton Co.,** Shelton, Ct.

**Upson Nut Co.,** Cleveland, O.

**Bolts, Copper—**

**Detroit Screw Works,** Detroit, Mich.

**Eynon-Evans Mfg. Co.,** 1507 Clearfield St., Philadelphia, Pa.

**Wm. H. Haskell Mfg. Co.,** Pawtucket, R. I.

**U. T. Hungerford Brass & Copper Co.,** 497-505 Pearl St., New York.

**Kilborn & Bishop Co.,** New Haven, Ct.

**National-Acme Mfg. Co.,** Cleveland, O.

**Pawtucket Mfg. Co.,** Pawtucket, R. I.

**Russell, Burdall & Ward Bolt & Nut Co.,** Port Chester, N. Y.

**Bolts, Countersunk—**

(See Bolts, Special, &c.)

**Bolts, Coupling—**

(See Bolts, Special.)

**Bolts, Cross Arm—**

(See Telegraph and Telephone Pole Supplies.)

**Bolts, Cultivator and Guard**

Anchor Bolt &amp; Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Russell, Burdsall &amp; Ward Bolt &amp; Nut Co., Port Chester, N. Y.

Upson Nut Co., Cleveland, O.

Whitman &amp; Barnes Mfg. Co., Chicago, Ill.

**Bolts, Cupboard—**

Peck, Stow &amp; Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell &amp; Erwin Mfg. Co., 94-98 Lafayette St., New York.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Bolts, Dash—**

Anchor Bolt &amp; Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Franklin Moore Co., Winsted, Ct.

Russell, Burdsall &amp; Ward Bolt &amp; Nut Co., Port Chester, N. Y.

Upson Nut Co., Cleveland, O.

**Bolts, Deck—**

Russell, Burdsall &amp; Ward Bolt &amp; Nut Co., Port Chester, N. Y.

**Bolts, Dock—**

Russell, Burdsall &amp; Ward Bolt &amp; Nut Co., Port Chester, N. Y.

**Bolts, Door—**

Arcade Mfg. Co., Freeport, Ill.

Columbia Grey Iron Co., Columbia, Pa.

Griffin Mfg. Co., Erie, Pa.

H. B. Ives Co., New Haven, Ct.

Ney Mfg. Co., Canton, O.

Peck, Stow &amp; Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell &amp; Erwin Mfg. Co., 94-98 Lafayette St., New York.

Shelby Spring Hinge Co., Shelby, O.

Stanley Works, New Britain, Ct.

Taylor &amp; Boggis Foundry Co., Cleveland, O.

Wrightsville Hardware Co., Wrightsville, Pa.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Bolts, Double Awning—**

M. Lanz &amp; Sons, Pittsburgh, Pa.

**Bolts, Drift—**

(See Spikes, Dock, Wharf, &amp;c.)

**Bolts, Elevator Bucket—**

American Iron &amp; Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt &amp; Nut Co., Poughkeepsie, N. Y.

Avery Stamping Co., Cleveland, O.

Clark Bros. Bolt Co., Milldale, Ct.

W. J. Clark Co., Salem, O.

Garland Nut &amp; Rivet Co., Pittsburgh, Pa.

Samuel Hall's Sons, 229-233 W. 10th St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Republic Iron &amp; Steel Co., Pittsburgh, Pa.

Upson Nut Co., Cleveland, O.

Lockhart Iron &amp; Steel Co., Pittsburgh, Pa.

Russell, Burdsall &amp; Ward Bolt &amp; Nut Co., Port Chester, N. Y.

Webster Mfg. Co., 1075 W. 15th St., Chicago, Ill.

**Bolts, Expansion. Brass.****Bronze &c.**  
Star Expansion Bolt Co., 147-149 Cedar St., New York.**Bolts, Expansion, Lag Screw****and Wood Screw—**  
Brohard Co., 1824 No. 9th St., Philadelphia, Pa.

Diamond Expansion Bolt Co., 90 West St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Star Expansion Bolt Co., 147-149 Cedar St., New York.

Steward &amp; Romaine Mfg. Co., Philadelphia, Pa.

**Bolts, Expansion. Single****and Double—**  
Isaac Church, South Norwalk, Ct.

Diamond Expansion Bolt Co., 90 West St., New York.

F. H. Evans, Brooklyn, N. Y.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz &amp; Sons, Pittsburgh, Pa.

McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.

Richards Mfg. Co., Aurora, Ill.

A. C. Seaman, 1638 Hutchinson St., Philadelphia, Pa.

Star Expansion Bolt Co., 147-149 Cedar St., New York.

Steward &amp; Romaine Mfg. Co., Philadelphia, Pa.

**Bolts, Extension—**

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Bolts, Eye—**

American Bridge Co. of New York, 30 Church St., New York.

American Iron &amp; Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt &amp; Nut Co., Poughkeepsie, N. Y.

Bethlehem Steel Co., Bethlehem, Pa.

Billings &amp; Spencer Co., Hartford, Ct.

Bradlee &amp; Co., Beach St. &amp; E. Susquehanna Ave., Philadelphia, Pa.

Clark Bros. Bolt Co., Milldale, Ct.

Cleveland City Forge &amp; Iron Co., Cleveland, O.

Garland Nut &amp; Rivet Co., Pittsburgh, Pa.

Samuel Hall's Sons, 229-233 W. 10th St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Keystone Drop Forge Works, Chester, Pa.

M. Lanz &amp; Sons, Pittsburgh, Pa.

Thomas Laughlin Co., Portland, Me.

National Bolt &amp; Nut Co., Pittsburgh, Pa.

New Castle Forge &amp; Bolt Co., New Castle, Pa.

Oliver Iron &amp; Steel Co., Pittsburgh, Pa.

Parker Wire Goods Co., Worcester, Mass.

Republic Iron &amp; Steel Co., Pittsburgh, Pa.

Rhode Island Tool Co., Providence, R. I.

Strieby &amp; Foot Co., Newark, N. J.

W. &amp; J. Tiebout, 118 Chambers St., N. Y.

Transue &amp; Williams Co., Alliance, O.

Upson Nut Co., Cleveland, O.

J. H. Williams &amp; Co., Brooklyn, N. Y.

Wire Goods Co., Worcester, Mass.

**Bolts, Fancy (Cone, Steeple, Elliptic, Thread, Body Loop, &c.).—**

Clark Bros. Bolt Co., Milldale, Ct.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Franklin Moore Co., Winsted, Ct.  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Upson Nut Co., Cleveland, O.  
(See also Bolts, Special.)

**Bolts, Fin Head—**

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**Bolts, Foot Chain—**  
(See Bolts, Door.)

**Bolts, Forged—**

American Iron & Steel Mfg. Co., Lebanon, Pa.  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Clark Bros. Bolt Co., Milldale, Ct.  
Detroit Screw Works, Detroit, Mich.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
M. Lanz & Sons, Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.  
Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
Pittsburgh Mfg. Co., Pittsburgh, Pa.  
Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**Bolts, Foundation—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Iron & Steel Mfg. Co., Lebanon, Pa.  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Belmont Iron Works, Inc., Philadelphia.  
Cleveland City Forge & Iron Co., Cleveland, O.

Fort Pitt Forge Co., Pittsburgh, Pa.  
Samuel Hall's Sons, 229-233 W. 10th St., New York.

M. Lanz & Sons, Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
Pittsburgh Mfg. Co., Pittsburgh, Pa.  
Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.

**Bolts, Galvanized—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Clark Bros. Bolt Co., Milldale, Ct.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Samuel Hall's Sons, 229-233 W. 10th St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
M. Lanz & Sons, Pittsburgh, Pa.  
Thomas Laughlin Co., Portland, Me.

National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

W. & J. Tiebout, 118 Chambers St., N. Y.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Bolts, Guard—**

(See Bolts, Cultivator.)

**Bolts, Hanger—**

(See Bolts, Special.)

**Bolts, Head—**

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Bolts, Hollow Stay—**

Falls Hollow Staybolt Co., Cuyahoga Falls, O.

National Tube Co., Pittsburgh, Pa.

**Bolts, Hook—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
M. Lanz & Sons, Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Pittsburgh Mfg. Co., Pittsburgh, Pa.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Upson Nut Co., Cleveland, O.

**Bolts, Key—**

Allegheny Forging Co., Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

**Bolts, King—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

E. D. Clapp Mfg. Co., Auburn, N. Y.  
Clark Bros. Bolt Co., Milldale, Ct.  
Richard Eccles Co., Auburn, N. Y.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.

Scranton Forging Co., Scranton, Pa.  
M. Seward & Son Co., New Haven, Ct.  
Upson Nut Co., Cleveland, O.

**Bolts, Loom—**

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.  
Garland Nut & Rivet Co., Pittsburgh, Pa.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
National-Acme Mfg. Co., Cleveland, O.

Upson Nut Co., Cleveland, O.

**Bolts, Machine—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.  
Detroit Screw Works, Detroit, Mich.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.

Garland Nut & Rivet Co., Pittsburgh, Pa.  
Graham Nut Co., Pittsburgh, Pa.  
Sam'l Hall's Sons, 229-233 W. 10th St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
M. Lanz & Sons, Pittsburgh, Pa.

**Bolts, Cross Arm—**

(See Telegraph and Telephone Pole Supplies.)

**Bolts, Cultivator and Guard**  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.Clark Bros. Bolt Co., Milldale, Ct.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Upson Nut Co., Cleveland, O.  
Whitman & Barnes Mfg. Co., Chicago, Ill.**Bolts, Cupboard—**Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Yale & Towne Mfg. Co., 9 Murray St., New York.**Bolts, Dash—**Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
Clark Bros. Bolt Co., Milldale, Ct.  
Franklin Moore Co., Winsted, Ct.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Upson Nut Co., Cleveland, O.**Bolts, Deck—**

Russell, Burdall &amp; Ward Bolt &amp; Nut Co., Port Chester, N. Y.

**Bolts, Dock—**

Russell, Burdall &amp; Ward Bolt &amp; Nut Co., Port Chester, N. Y.

**Bolts, Door—**Arcade Mfg. Co., Freeport, Ill.  
Columbia Grey Iron Co., Columbia, Pa.  
Griffin Mfg. Co., Erie, Pa.  
H. B. Ives Co., New Haven, Ct.  
Ney Mfg. Co., Canton, O.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Shelby Spring Hinge Co., Shelby, O.  
Stanley Works, New Britain, Ct.  
Taylor & Boggis Foundry Co., Cleveland, O.  
Wrightsville Hardware Co., Wrightsville, Pa.  
Yale & Towne Mfg. Co., 9 Murray St., New York.**Bolts, Double Awning—**

M. Lanz &amp; Sons, Pittsburgh, Pa.

**Bolts, Drift—**

(See Spikes, Dock, Wharf, &amp;c.)

**Bolts, Elevator Bucket—**American Iron & Steel Mfg. Co., Lebanon, Pa.  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
Avery Stamping Co., Cleveland, O.  
Clark Bros. Bolt Co., Milldale, Ct.  
W. J. Clark Co., Salem, O.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Samuel Hall's Sons, 229-233 W. 10th St., New York.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Upson Nut Co., Cleveland, O.  
Lockhart Iron & Steel Co., Pittsburgh, Pa.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Webster Mfg. Co., 1075 W. 15th St., Chicago, Ill.

**Bolts, Expansion. Brass. Bronze, &c.—**

Star Expansion Bolt Co., 147-149 Cedar St., New York.

**Bolts, Expansion, Lag Screw and Wood Screw—**Brohard Co., 1624 No. 9th St., Philadelphia, Pa.  
Diamond Expansion Bolt Co., 90 West St., New York.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Star Expansion Bolt Co., 147-149 Cedar St., New York.

Steward &amp; Romaine Mfg. Co., Philadelphia, Pa.

**Bolts, Expansion. Single and Double—**Isaac Church, South Norwalk, Ct.  
Diamond Expansion Bolt Co., 90 West St., New York.  
F. H. Evans, Brooklyn, N. Y.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.M. Lanz & Sons, Pittsburgh, Pa.  
McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.Richards Mfg. Co., Aurora, Ill.  
A. C. Seaman, 1638 Hutchinson St., Philadelphia, Pa.

Star Expansion Bolt Co., 147-149 Cedar St., New York.

Steward &amp; Romaine Mfg. Co., Philadelphia, Pa.

**Bolts, Extension—**

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Bolts, Eye—**American Bridge Co. of New York, 30 Church St., New York.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt &amp; Nut Co., Poughkeepsie, N. Y.

Bethlehem Steel Co., Bethlehem, Pa.  
Billings & Spencer Co., Hartford, Ct.

Bradlee &amp; Co., Beach St. &amp; E. Susquehanna Ave., Philadelphia, Pa.

Clark Bros. Bolt Co., Milldale, Ct.  
Cleveland City Forge & Iron Co., Cleveland, O.Garland Nut & Rivet Co., Pittsburgh, Pa.  
Samuel Hall's Sons, 229-233 W. 10th St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Keystone Drop Forge Works, Chester, Pa.  
M. Lanz & Sons, Pittsburgh, Pa.Thomas Laughlin Co., Portland, Me.  
National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge &amp; Bolt Co., New Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Parker Wire Goods Co., Worcester, Mass.Republic Iron & Steel Co., Pittsburgh, Pa.  
Rhode Island Tool Co., Providence, R. I.Strieby & Foot Co., Newark, N. J.  
W. & J. Tiebout, 118 Chambers St., N. Y.Transue & Williams Co., Alliance, O.  
Upson Nut Co., Cleveland, O.J. H. Williams & Co., Brooklyn, N. Y.  
Wire Goods Co., Worcester, Mass.

**Bolts, Fancy (Cone, Steeple, Elliptic, Thread, Body Loop, &c.)—**

Clark Bros. Bolt Co., Milldale, Ct.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Franklin Moore Co., Winsted, Ct.  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Upson Nut Co., Cleveland, O.  
(See also Bolts, Special.)

**Bolts, Fin Head—**

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**Bolts, Foot Chain—**

(See Bolts, Door.)

**Bolts, Forged—**

American Iron & Steel Mfg. Co., Lebanon, Pa.  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Bethlehem Steel Co., So. Bethlehem, Pa.  
Clark Bros. Bolt Co., Milldale, Ct.

Detroit Screw Works, Detroit, Mich.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

Pittsburgh Mfg. Co., Pittsburgh, Pa.  
Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.

Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**Bolts, Foundation—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Belmont Iron Works, Inc., Philadelphia.

Cleveland City Forge & Iron Co., Cleveland, O.

Fort Pitt Forge Co., Pittsburgh, Pa.

Samuel Hall's Sons, 229-233 W. 10th St., New York.

M. Lanz & Sons, Pittsburgh, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

Pittsburgh Mfg. Co., Pittsburgh, Pa.

Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.

**Bolts, Galvanized—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Clark Bros. Bolt Co., Milldale, Ct.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Samuel Hall's Sons, 229-233 W. 10th St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.

Thomas Laughlin Co., Portland, Me.

National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

Rhode Island Tool Co., Providence, R. I.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

W. & J. Tiebout, 118 Chambers St., N. Y.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Bolts, Guard—**

(See Bolts, Cultivator.)

**Bolts, Hanger—**

(See Bolts, Special.)

**Bolts, Heel—**

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Bolts, Hollow Stay—**  
Falls Hollow Staybolt Co., Cuyahoga Falls, O.

National Tube Co., Pittsburgh, Pa.

**Bolts, Hook—**

Allegheny Forging Co., Pittsburgh, Pa.

American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Garland Nut & Rivet Co., Pittsburgh, Pa.

M. Lanz & Sons, Pittsburgh, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Pittsburgh Mfg. Co., Pittsburgh, Pa.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Upson Nut Co., Cleveland, O.

**Bolts, Key—**

Allegheny Forging Co., Pittsburgh, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

**Bolts, King—**

Allegheny Forging Co., Pittsburgh, Pa.

American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

E. D. Clapp Mfg. Co., Auburn, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Richard Eccles Co., Auburn, N. Y.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

Scranton Forging Co., Scranton, Pa.

M. Seward & Son Co., New Haven, Ct.

Upson Nut Co., Cleveland, O.

**Bolts, Loom—**

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

National Acme Mfg. Co., Cleveland, O.

Upson Nut Co., Cleveland, O.

**Bolts, Machine—**

Allegheny Forging Co., Pittsburgh, Pa.

American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Detroit Screw Works, Detroit, Mich.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Graham Nut Co., Pittsburgh, Pa.

Sam'l Hall's Sons, 229-233 W. 10th St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.



McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Milton Mfg. Co., Milton, Pa.

National-Acme Mfg. Co., Cleveland, O.

National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

Pawtucket Mfg. Co., Pawtucket, R. I.

Phosphor Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.

Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

Pittsburgh Mfg. Co., Pittsburgh, Pa.

Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

Rhode Island Tool Co., Providence, R. I.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Shelton Co., Shelton, Ct.

Upon Nut Co., Cleveland, O.

**Bolts, Mine Hanger, Expansion—**

Star Expansion Bolt Co., 147-149 Cedar St., New York.

**Bolts, Mosquito Bar—**

Reading Hardware Co., Reading, Pa.

**Bolts, Planer Head—**

Chicago Screw Co., 2 N. Canal St., Chicago, Ill.

Detroit Screw Works, Detroit, Mich.

Hartford Machine Screw Co., Hartford, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

National-Acme Mfg. Co., Cleveland, O.

Pawtucket Mfg. Co., Pawtucket, R. I.

Rhode Island Tool Co., Providence, R. I.

Worcester Machine Screw Co., Worcester, Mass.

**Bolts, Plow—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Republic Iron & Steel Co., Pittsburgh, Pa.

Russell, Burdall & Ward Nut & Bolt Co., Port Chester, N. Y.

Shelton Co., Shelton, Ct.

Upon Nut Co., Cleveland, O.

**Bolts, Reach—**

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Franklin Moore Co., Winsted, Ct.

Upon Nut Co., Cleveland, O.

**Bolts, Ring—**

Thomas Laughlin Co., Portland, Me.

W. & J. Tiebout, 118 Chambers St., N. Y.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Bolts, Screen—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

**Bolts, Seat—**

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Franklin Moore Co., Winsted, Ct.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Upon Nut Co., Cleveland, O.

**Bolts, Shackle—**

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Upon Nut Co., Cleveland, O.

**Bolts, Shutter—**

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-96 Lafayette St., New York.

Stanley Works, New Britain, Ct.

**Bolts, Sink—**

American Screw Co., Providence, R. I.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Atlas Bolt & Screw Co., Cleveland, O.

Blake & Johnson Co., Waterbury, Ct.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Reed & Prince Mfg. Co., Worcester, Mass.

Republic Iron & Steel Co., Pittsburgh, Pa.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Shelton Co., Shelton, Ct.

Upon Nut Co., Cleveland, O.

**Bolts, Sleigh Shoe—**

American Screw Co., Providence, R. I.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Franklin Moore Co., Winsted, Ct.

Republic Iron & Steel Co., Pittsburgh, Pa.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Upon Nut Co., Cleveland, O.

**Bolts, Socket—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Samuel Hall's Sons, 229-233 W. 10th St., New York.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Bolts, Solid Stay—**

Falls Hollow Staybolt Co., Cuyahoga Falls, O.

**Bolts, Special — Coupling**

**Screen, Deck, Hanger,**

**Joint, Button Head, Bung**

**Head, Boiler, Headless,**

**Slotted Head, Hook Head,**

**Pinch Head, Cube Head,**

**&c.—**

Allegheny Forging Co., Pittsburgh, Pa.

American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Atlas Bolt & Screw Co., Cleveland, O.

Blake & Johnson Co., Waterbury, Ct.

Chicago Screw Co., 2 Canal St., Chicago, Ill.

Clark Bros. Bolt Co., Milldale, Ct.

Detroit Screw Works, Detroit, Mich.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Samuel Hall's Sons, 229-233 W. 10th St., New York.

Hartford Machine Screw Co., Hartford, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.

McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.  
Franklin Moore Co., Winsted, Ct.  
National-Acme Mfg. Co., Cleveland, O.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Pawtucket Mfg. Co., Pawtucket, R. I.  
Pittsburgh Mfg. Co., Pittsburgh, Pa.  
Pittsburgh Screw & Bolt Co., Pittsburgh.  
Reed & Prince Mfg. Co., Boston, Mass.  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Upson Nut Co., Cleveland, O.  
Worcester Machine Screw Co., Worcester, Mass.

**Bolts, Spring, Carriage—**  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.  
Garland Nut & Rivet Co., Pittsburgh, Pa.

**Bolts, Square and Hexagon Heads—**  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Pawtucket Mfg. Co., Pawtucket, R. I.  
Pittsburgh Forge & Iron Co., Pittsburgh.  
Rhode Island Tool Co., Providence, R. I.

**Bolts, Stove—**  
American Screw Co., Providence, R. I.  
Atlas Bolt & Screw Co., Cleveland, O.  
Atlas Car & Mfg. Co., Cleveland, O.  
Clark Bros. Bolt Co., Milldale, Ct.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.

Ireland & Matthews Mfg. Co., Detroit, Mich.

Reed & Prince Mfg. Co., Worcester, Mass.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Shelton Co., Shelton, Ct.  
Upson Nut Co., Cleveland, O.

**Bolts, Structural—**  
National Bolt & Nut Co., Pittsburgh, Pa.

**Bolts, Stud—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.  
Detroit Screw Works, Detroit, Mich.

Garland Nut & Rivet Co., Pittsburgh, Pa.  
Samuel Hall's Sons, 229-233 W. 10th St., New York.

Hartford Machine Screw Co., Hartford, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
M. Lanz & Sons, Pittsburgh, Pa.

National-Acme Mfg. Co., Cleveland, O.  
National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

New Haven Machine Screw Co., New Haven, Ct.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Pawtucket Mfg. Co., Pawtucket, R. I.

Pittsburgh Screw & Bolt Co., Pittsburgh.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Strieby & Foote Co., Newark, N. J.  
Upson Nut Co., Cleveland, O.  
Worcester Machine Screw Co., Worcester, Mass.

**Bolts, T Head—**  
(See Bolts, Special.)

**Bolts, Tap—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Anchor Bolt & Nut Co., Poughkeepsie, N. Y.

Clark Bros. Bolt Co., Milldale, Ct.  
Detroit Screw Works, Detroit, Mich.

Garland Nut & Rivet Co., Pittsburgh, Pa.  
Samuel Hall's Sons, 229-233 W. 10th St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
M. Lanz & Sons, Pittsburgh, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Pawtucket Mfg. Co., Pawtucket, R. I.

Pittsburgh Screw & Bolt Co., Pittsburgh.  
Republic Iron & Steel Co., Pittsburgh, Pa.

Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Upson Nut Co., Cleveland, O.

**Bolts, Tire—**  
American Screw Co., Providence, R. I.

Atlas Bolt & Screw Co., Cleveland, O.  
Atlas Car & Mfg. Co., Cleveland, O.

Clark Bros. Bolt Co., Milldale, Ct.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.

Reed & Prince Mfg. Co., Worcester, Mass.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Shelton Co., Shelton, Ct.  
Upson Nut Co., Cleveland, O.

**Bolts, Tire, Automobile—**  
Pawtucket Mfg. Co., Pawtucket, R. I.

**Bolts, Toggle—**  
(See Bolts, Anchor or Toggle.)

**Bolts, Track—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Arthur Koppel Co., Pittsburgh, Pa.  
M. Lanz & Sons, Pittsburgh, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.  
Upson Nut Co., Cleveland, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Bolts, Trunk and Sample Case—**  
R. C. Jenkinson & Co., Newark, N. J.

J. H. Sessions & Son, Bristol, Ct.

**Bolts, U—**  
Allegheny Forging Co., Pittsburgh, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.

Rhode Island Tool Co., Providence, R. I.

**Bolts, Wagon Box Strap—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.

**Bolts, Water Closet, Indicator—**

Bommer Bros., Brooklyn, N. Y.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Bolts, Whiffletree—**

Franklin Moore Co., Winsted, Ct.  
Russell, Burdall & Ward, Bolt & Nut Co., Port Chester, N. Y.  
Upon Nut Co., Cleveland, O.

**Bolts, Window Spring—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Bolts, Window, Ventilating—**

H. B. Ives Co., New Haven, Ct.  
Richards Mfg. Co., Aurora, Ill.  
Superior Spring Hinge Co., 123 So. Clinton St., Chicago, Ill.

**Bonds, Rail—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Morgan Spring Co., Worcester, Mass.  
Ohio Brass Co., Mansfield, O.

**Bone, Case Hardening—**

S. Obermayer Co., Cincinnati, O.  
J. W. Paxson Co., Philadelphia, Pa.

**Bone Mills—**

(See Mills, Bone.)

**Book Binders' Machinery—**

Sigourney Tool Co., Hartford, Ct.

**Book Binder Wire—**

(See Wire, Bottling, Book Binder, &c.)

**Book, Paper and Card Racks—**

(See Racks, Card, Book and Paper.)

**Books—**

System, 151-153 Wabash Ave., Chicago, Ill.  
David Williams Co., 14-16 Park Place, New York.

**Books, Loose Leaf and Price—**

David Williams Co., 14-16 Park Place, New York.

**Books, Weight Ticket—**

Standard Scale & Supply Co., Pittsburgh.

**Boom Travelers—**

(See Travelers, Boom and Deck.)

**Booster Sets, Electric—**

Jas. Clark, Jr., Electric Co., Louisville, Ky.

Crocker-Wheeler Co., Ampere, N. J.  
Fort Wayne Electrical Works, Fort Wayne, Ind.

General Electric Co., Schenectady, N. Y.

**Boot Calks, Jacks—**

(See Calks, Jacks.)

**Boots and Sewer Connections—**

Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

**Boots, Elevator—**

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. J. Clark Co., Salem, O.

Interstate Engineering Co., Bedford, O.  
Link-Belt Co., Philadelphia, Pa.

**Boots, Interfering—**

Covert Mfg. Co., Troy, N. Y.

**Borers, Bung Hole—**

Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.

Elmore Tool Mfg. Co., Hartford, Ct.

Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

James Swan Co., Seymour, Ct.

**Borers, Counter—**

Cleveland Twist Drill Co., Cleveland, O.

Morse Twist Drill & Machine Co., New Bedford, Mass.

E. F. Reece Co., Greenfield, Mass.

**Boring and Drilling Machines, Horizontal—**

Lucas Machine Tool Co., Cleveland, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Boring and Facing Machines, Duplex Pump—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

**Boring and Polishing Machines, Electrical—**

United States Electrical Tool Co., Cincinnati, O.

**Boring and Turning Mills—**

(See Mills, Boring and Turning.)

**Boring Bars—**

Charles F. Elmes Engineering Works, 253 Fulton St., Chicago, Ill.

Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Boring Bars for Lathe Work—**

Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Boring Bars for Locomotive Cylinder—**

Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

**Boring Bars for Locomotive Cylinders, Portable—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Nappanee Iron Works, Nappanee, Ind.

Niles-Bement-Pond Co., 111 Broadway, New York.

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.  
H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Boring, Drilling and Milling Machines, Horizontal—**  
Lucas Machine Tool Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Universal Boring Machine Co., Hudson, Mass.

**Boring Machines, Bit Extension—**  
Ford Auger Bit Co., Holyoke, Mass.

**Boring Machines, Car Box—**  
Detrick & Harvey Mch. Co., Baltimore, Md.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Boring Machines, Car Wheel—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Boring Machines, Carpenters—**

Hobbs Mfg. Co., Worcester, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Millers Falls Co., 28 Warren St., N. Y.  
Oliver Machinery Co., Grand Rapids, Mich.  
Snell Mfg. Co., Flakdale, Mass.  
James Swan Co., Seymour, Ct.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Boring Machines, Cylinder—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Newton Machine Tool Works, 23d & Vine Sts., Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.  
H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Boring Machines, Electricians' and Plumbers'—**  
Ford Auger Bit Co., Holyoke, Mass.

**Boring Machines for Sash Pulleys—**  
Wrightsville Hardware Co., Wrightsville, Pa.

**Boring Machines, Gang—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Williams, White & Co., Inc., Moline, Ill.

**Boring Machines, Horizontal—**

Crescent Machine Co., Leetonia, O.  
Hoefler Mfg. Co., Freeport, Ill.  
Lucas Machine Tool Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Universal Boring Machine Co., Hudson, Mass.

**Boring Machines, Hub—**  
(See Hub Boring Machines.)

**Boring Machines, Last—**  
Hobbs Mfg. Co., Worcester, Mass.

**Boring Machines, Locomotive—**

Espen-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Boring Machines, Man Hole—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Boring Machines, Pulley—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Boring Machines, Sash and Blind—**

Grand Rapids Hardware Co., Grand Rapids, Mich.  
Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

**Boring Machines, Vertical—**  
Crescent Machine Co., Leetonia, O.  
Hoefler Mfg. Co., Freeport, Ill.

**Boring Machines, Wood—**  
Badger Machine Co., Janesville, Wis.  
Fox Machine Co., Grand Rapids, Mich.  
Hobbs Mfg. Co., Worcester, Mass.  
Ingersoll-Rand Co., 11 Broadway, New York.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Oliver Machinery Co., Grand Rapids, Mich.  
United States Electrical Tool Co., Cincinnati, O.

**Boring Machines, Wood, Pneumatic—**

Helwig Mfg. Co., St. Paul, Minn.  
**Boring Tools, Metal and Wood—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.  
Goodell Mfg. Co., Greenfield, Mass.  
Goodell-Pratt Co., Greenfield, Mass.  
Keystone Mfg. Co., Buffalo, N. Y.  
Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Millers Falls Co., 28 Warren St., N. Y.

**Bottle Cap Machinery—**  
E. W. Bliss Co., Brooklyn, N. Y.  
V. & O. Press Co., Brooklyn, N. Y.  
Zeh & Hahnemann Co., Newark, N. J.

**Bottles, Steel—**  
Avery Stamping Co., Cleveland, O.  
National Tube Co., Pittsburgh, Pa.  
Standard Welding Co., Cleveland, O.

**Bottling Machinery—**  
Baird Machine Co., Oakville, Ct.  
Vilter Mfg. Co., Milwaukee, Wis.

**Bottling Wire—**  
(See Wire, Bottling, Book Binder, &c.)

**Bottoms, Can and Barrel—**  
W. J. Clark Co., Salem, O.

**Bowers, Shutter—**  
F. P. Smith & Co., Sharon Hill, Pa.

- Bowie Knives—**  
Adolph Kastor & Bros., 109 Duane St., New York.
- Bowls, Berry, Fruit, Ice, Sugar, &c., Silver and Silver Plated—**  
International Silver Co., Meriden, Ct.
- Bowls, Brazing—**  
Joseph Dixon Crucible Co., Jersey City, N. J.
- Bowls, Cream Separator—**  
National Tube Co., Pittsburgh, Pa.  
Standard Welding Co., Cleveland, O.  
Worcester Pressed Steel Co., Worcester, Mass.
- Bowls, Forged Separator—**  
Avery Stamping Co., Cleveland, O.  
Keystone Drop Forge Works, Chester, Pa.  
Strieby & Foote Co., Newark, N. J.  
Worcester Pressed Steel Co., Worcester, Mass.
- Bowls, Ladle, Pressed Steel—**  
W. J. Clark Co., Salem, O.
- Bowls, Ladle, Riveted—**  
Whiting Foundry Equipment Co., Harvey, Ill.
- Bowls, Punch, Silver Plated—**  
International Silver Co., Meriden, Ct.
- Bowls, Salad—**  
International Silver Co., Meriden, Ct.
- Bowls, Scotch, Steel—**  
Avery Stamping Co., Cleveland, O.
- Bows, Ox—**  
American Fork & Hoe Co., Cleveland, O.
- Box Board Sawing and Finishing Machinery—**  
Peter Gerlach Co., Cleveland, O.  
Hobbs Mfg. Co., Worcester, Mass.  
Humphrey Machine Co., Keene, N. H.
- Box Chisels, &c.—**  
(See Chisels, Box.)
- Box Factory Machinery—**  
Hobbs Mfg. Co., Worcester, Mass.  
Humphrey Machine Co., Keene, N. H.
- Boxes and Cases, Packing—**  
H. F. Brammer Mfg. Co., Davenport, Ia.  
A. H. Green Co., 97-101 Warren St., N. Y.
- Boxes and Jars, Cigar, Silver Plated—**  
International Silver Co., Meriden, Ct.
- Boxes and Trays, Shop—**  
Manufacturing Equipment & Engineering Co., Boston, Mass.
- Boxes, Annealing—**  
W. J. Clark Co., Salem, O.  
Mechan Boiler & Construction Co., Lowellville, O.
- Boxes, Bill and Change—**  
Merriam Mfg. Co., Durham, Ct.
- Boxes, Cash and Bond—**  
Merriam Mfg. Co., Durham, Ct.  
Miller Lock Co., Philadelphia, Pa.
- Boxes, Coal—**  
W. J. Clark Co., Salem, O.
- Boxes, Draining—**  
W. J. Clark Co., Salem, O.
- Boxes, Dumping—**  
W. J. Clark Co., Salem, O.
- Boxes, Electrical Switch and Outlet—**  
Bossert Electric Construction Co., Utica, N. Y.
- Boxes, Emery—**  
Universal Caster & Foundry Co., 1170 Broadway, New York.
- Boxes, Farrier Tool—**  
B. B. Noyes & Co., Greenfield, Mass.
- Boxes, Feed—**  
(See Mangers.)
- Boxes, Fishing Tackle—**  
Clark-Horrocks Co., Utica, N. Y.  
Merriam Mfg. Co., Durham, Ct.
- Boxes, Galvanizing—**  
R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.
- Boxes, Glove, Match, Powder, Soap, Stamp, &c., Silver and Silver Plated—**  
International Silver Co., Meriden, Ct.
- Boxes, Hardware—**  
(See Boxes, Shelf.)
- Boxes, Journal, Railroad—**  
T. H. Symington Co., Baltimore, Md.
- Boxes, Knife—**  
Arcade Mfg. Co., Freeport, Ill.
- Boxes, Letter—**  
Dufur & Co., Baltimore, Md.
- Boxes, Lock—**  
Kilbourne Mfg. Co., Troy, N. Y.  
Reading Hardware Co., Reading, Pa.  
Yale & Towne Mfg. Co., 9 Murray St., New York.
- Boxes, Lock Corner—**  
A. H. Green Co., 97-101 Warren St., N. Y.
- Boxes, Lunch—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.
- Boxes, Magneto, to Order—**  
Union Hardware Co., Torrington, Ct.
- Boxes, Mail—**  
Forest City Foundry & Mfg. Co., Cleveland, O.
- Boxes, Mail, Rural—**  
Kilbourne Mfg. Co., Troy, N. Y.  
Merriam Mfg. Co., Durham, Ct.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Stuart & Peterson Co., Burlington, N. J.  
Taylor & Boggis Foundry Co., Cleveland.
- Boxes, Mail, Rural—**  
H. E. Hessler Co., Syracuse, N. Y.  
Johnson Mfg. Co., Urbana, O.
- Boxes, Miter—**  
Goodell Mfg. Co., Greenfield, Mass.  
C. E. Jennings & Co., 42 Murray St., New York.
- Boxes, Mortar—**  
W. J. Clark Co., Salem, O.
- Boxes, Nail—**  
W. J. Clark Co., Salem, O.
- Boxes, Oily Waste—**  
(See Cans, Oily Waste.)

- Boxes, Packing—**  
(See Cases, Shipping.)
- Boxes, Post Office Lock—**  
Eagle Lock Co., Terryville, Ct.  
Yale & Towne Mfg. Co., 9 Murray St., New York.
- Boxes, Roller Bearing Shaft—**  
Bancroft & Co., Philadelphia, Pa.
- Boxes, Sait and Spice—**  
Arcade Mfg. Co., Freeport, Ill.
- Boxes, Shaft Bearing—**  
Bancroft & Co., Philadelphia, Pa.  
W. E. Caldwell Co., Louisville, Ky.  
H. W. Caldwell & Son Co., Western Ave., 17th and 18th Sts., Chicago, Ill.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.  
W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.  
Link-Belt Co., Inc., Philadelphia, Pa.  
Wickes Bros., Saginaw, Mich.
- Boxes, Shelf—**  
Gem Mfg. Co., Boston, Mass.  
A. H. Green Co., 97-101 Warren St., N. Y.  
W. C. Heller & Co., Montpelier, O.  
C. P. Moore, Ravenswood, W. Va.  
Terrell's Equipment Co., Grand Rapids, Mich.
- J. D. Warren Mfg. Co., Chicago, Ill.**
- Boxes, Shoe Shining—**  
Louis Sacks Foundry Co., Newark, N. J.
- Boxes, Shop—**  
Gem Mfg. Co., Boston, Mass.  
Globe Machine & Stamping Co., Cleveland, O.
- Boxes, Skeleton—**  
W. J. Clark Co., Salem, O.
- Boxes, Steaming—**  
W. J. Clark Co., Salem, O.
- Boxes, Steel Storage—**  
W. J. Clark Co., Salem, O.  
Wm. B. Scaife & Sons Co., Pittsburgh.
- Boxes, Steel Storage, Galvanized—**  
Sterling Blower & Pipe Mfg. Co., Hartford, Ct.
- Boxes, Steel Wall—**  
(See Telegraph and Telephone.)
- Boxes, Tablet, Cold Cream, &c. Aluminum—**  
Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.
- Boxes, Tin—**  
Eastern Machine & Stamping Co., Providence, R. I.
- Boxes, Tin, Office—**  
Merriam Mfg. Co., Durham, Ct.
- Boxes, Tin, Paymasters—**  
Merriam Mfg. Co., Durham, Ct.
- Boxes, Tin, Safe Deposit Vault—**  
Merriam Mfg. Co., Durham, Ct.
- Boxes, Tin, Theatrical Make Up—**  
Merriam Mfg. Co., Durham, Ct.
- Boxes, Tool—**  
Chas. H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.
- W. J. Clark Co., Salem, O.**
- Globe Machine & Stamping Co., Cleveland, O.**
- Boxes, Tote—**  
Avery Stamping Co., Cleveland, O.
- W. J. Clark Co., Salem, O.**
- Gem Mfg. Co., Boston, Mass.**
- Globe Machine & Stamping Co., Cleveland, O.**
- Kilbourne & Jacobs Mfg. Co., Columbus, O.**
- Boxes, Treasure—**  
Miller Lock Co., Philadelphia, Pa.
- Boxes, Tree—**  
(See Guards, Tree.)
- Boxes, Twine—**  
John Chatillon & Sons, 85-93 Cliff St., New York.
- Columbia Grey Iron Co., Columbia, Pa.**
- Landers, Frary & Clark, New Britain, Ct.**
- Peck, Stow & Wilcox Co., 27 Murray St., New York.**
- Reading Hardware Co., Reading, Pa.**
- Russell & Erwin Mfg. Co., 84-88 Lafayette St., New York.**
- Wire Goods Co., Worcester, Mass.**
- Boxes, Valve, Service and Stop Cock—**  
Central Foundry Co., 137 Wall St., N. Y.
- Boxes, Wash—**  
W. J. Clark Co., Salem, O.
- Boxes, Waste, Cast Iron—**  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.
- Boxes, Water and Water Meter—**  
R. W. Whitehurst Co., Norfolk, Va.
- Boxwood Rules—**  
(See Rules, Boxwood.)
- Braces and Rail, Top—**  
E. D. Clapp Mfg. Co., Auburn, N. Y.
- Braces, Arm—**  
(See Telegraph and Telephone.)
- Braces, Binding, Casket—**  
R. C. Jenkinson & Co., Newark, N. J.
- Braces, Bit—**  
John S. Fray & Co., Bridgeport, Ct.  
Goodell-Pratt Co., Greenfield, Mass.  
John H. Graham & Co., 113 Chambers St., New York.
- C. E. Jennings Co., 42 Murray St., N. Y.**
- Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.**
- H. H. Mayhew Co., Shelburne Falls, Mass.**
- Millers Falls Co., 28 Warren St., N. Y.**
- Peck, Stow & Wilcox Co., 27 Murray St., New York.**
- Stanley Rule & Level Co., New Britain, Ct.**
- Braces, Corner Boring—**  
Bergman Tool Mfg. Co., Buffalo, N. Y.  
John S. Fray & Co., Bridgeport, Ct.  
Goodell-Pratt Co., Greenfield, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- H. H. Mayhew Co., Shelburne Falls, Mass.**
- Braces, Extension—**  
John S. Fray & Co., Bridgeport, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Millers Falls Co., 28 Warren St., N. Y.**
- Braces, Foot, Ladder—**  
Jas. L. Taylor Mfg. Co., Bloomfield, N. J.
- Braces, Rudder—**  
W. & J. Tiebout, 118 Chambers St., N. Y.
- Braces, Screen Door—**  
Arcade Mfg. Co., Freeport, Ill.
- Braces, Skate, Ankle—**  
Samuel Winslow Skate Mfg. Co., Worcester, Mass.

**Braces, Wagon Side—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.

**Bracket Saws—**  
(See Saws, Scroll.)

**Brackets—**  
(See Architectural Sheet Metal Work.)

**Brackets, Axe—**  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Brackets, Bird Cage—**  
(See Hooks, Bird Cage.)

**Brackets, Cup, Refrigerator—**  
Arcade Mfg. Co., Freeport, Ill.

**Brackets, Curtain Pole—**  
(See Curtain and Upholstery Fixtures.)

**Brackets, Egg Beater—**  
Taplin Mfg. Co., New Britain, Ct.

**Brackets, Electric Flexible—**  
T. R. Almond Mfg. Co., Ashburnham, Mass.

**Brackets, Flag—**  
Thomas Laughlin Co., Portland, Me.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Brackets, Flower Pot—**  
Andrews Wire & Iron Works, Rockford, Ill.

**Brackets, Flag—**  
Arcade Mfg. Co., Freeport, Ill.  
Columbia Grey Iron Co., Columbia, Pa.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Brackets, Folding—**  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Brackets, Foot Rail—**  
Arcade Mfg. Co., Freeport, Ill.

**Brackets, Hand Rail—**  
Arcade Mfg. Co., Freeport, Ill.  
H. B. Ives Co., New Haven, Ct.

**Brackets, Harness, Saddle, &c.—**  
(See Hooks, Harness.)

**Brackets, Hay Rack—**  
(See Clamps, Rack, Hay.)

**Brackets, Insulator—**  
Diamond Expansion Bolt Co., 90 West St., New York.

**Brackets, Lamp—**  
Arcade Mfg. Co., Freeport, Ill.  
Hevin Bros. Mfg. Co., E. Hampton, Ct.

**Brackets, Piano—**  
Columbia Grey Iron Co., Columbia, Pa.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Brackets, Office, Counter, &c.—**  
(See Railing and Brackets, Office, Counter, &c.)

**Brackets, Plumbing—**  
(See Plumbing Supplies, &c.)

**Brackets, Pole—**  
(See Telegraph and Telephone Pole Supplies.)

**Brackets, Rafter—**  
Louden Machinery Co., Fairfield, Ia.

**Brackets, Roofing—**  
F. E. Myers & Bro., Ashland, O.  
New Mfg. Co., Canton, O.

**Brackets, Shelf—**  
Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

**Brackets, Shingle, Steel—**  
Stanley Rule & Level Co., New Britain, Ct.

**Brackets, Side and Roll—**  
(See Architectural Sheet Metal Work.)

**Brackets, Sink—**  
Barnes Mfg. Co., Mansfield, O.  
Griffin Mfg. Co., Erie, Pa.

**Brackets, Soap—**  
(See Household Articles, Wire.)

**Brackets, Window Screen Corner—**  
Reading Hardware Co., Reading, Pa.

**Brackets, Brad Awls—**  
(See Awls, Peg, Brad, &c.)

**Brackets, Brads, Tacks, Finishing Nails, &c.—**  
(See Tacks, Brads, Finishing Nails, &c.)

**Brackets, Braided Rope, Linen, &c.—**  
(See Rope, Braided, Cotton, Linen, &c.)

**Brackets, Brake Beams, Car—**  
American Steel Foundries, 42 Broadway, New York.

**Brackets, Brake Chain, Shoes—**  
(See Chain, Shoes.)

**Brackets, Brakes, Automobile—**  
Globe Machine & Stamping Co., Cleveland, O.

**Brackets, Otto Konigslow Mfg. Co., Cleveland, O.**

**Brackets, Brakes, Band and Angle Iron—**  
Excelsior Tool & Machine Co., East St. Louis, Ill.

**Brackets, Brakes, Coaster Bicycle—**  
John H. Graham & Co., 113 Chambers St., New York.

**Brackets, Brakes, Cornice—**  
Niagara Machine & Tool Works, Buffalo, N. Y.

**Brackets, Brakes, Electric Controller & Mfg. Co., Cleveland, O.**

**Brackets, Brakes, Northern Engineering Works, Detroit, Mich.**

**Brackets, Brands, Burning—**  
A. G. Butler, 234-236 Pearl St., New York.

**Cleveland Galvanizing Works Co.,** Cleveland, O.

**George M. Ness,** 61 Fulton St., New York.

**Schwerdtle Stamp Co.,** Bridgeport, Ct.

**E. Woodman Mfg. & Supply Co.,** Boston.

**Brass and Copper Rods—**

**Bridgeport Brass Co.,** 253 Broadway, New York.

**Homer F. Livermore,** Boston, Mass.

**Paul S. Reeves & Son,** 1415 Catharine St., Philadelphia, Pa.

**Riverside Metal Co.,** Riverside, N. J.

**Seymour Mfg. Co.,** Seymour, Ct.

**Waterbury Brass Co.,** Waterbury, Ct.

**Brass Bedsteads, Bolts, &c.—**

(See Bedsteads, Bolts, &c.)

**Brass, Brazing—**

**Bridgeport Brass Co.,** 253 B'way, N. Y.

**U. T. Hungerford Brass & Copper Co.,** 497-505 Pearl St., New York.

**Riverside Metal Co.,** Riverside, N. J.

**Seymour Mfg. Co.,** Seymour, Ct.

**Brass, Embossed or Figured—**

**Bridgeport Brass Co.,** 253 B'way, N. Y.

**Waterbury Brass Co.,** Waterbury, Ct.

**Brass Finishers—**

**Clark Novelty Co.,** Rochester, N. Y.

**Turner Brass Works,** Sycamore, Ill.

**Whitlock Coil Pipe Co.,** Hartford, Ct.

**Brass Finishing Machines—**

**Dresses Machine Tool Co.,** Cincinnati, O.

**Manning, Maxwell & Moore, Inc.,** 85 Liberty St., New York.

**Niles-Sement-Pond Co.,** 111 Broadway, New York.

**Pratt & Whitney Co.,** Hartford, Ct.

**Warner & Swasey Co.,** Cleveland, O.

**Brass Goods—**

(See Cocks, Brass.)

**Brass, Hoop—**

**Bridgeport Brass Co.,** 253 B'way, N. Y.

**Brass, Ornamental—**

(See Iron, Brass, Bronze, Ornamental.)

**Brass, Perforated Sheet—**

**Clinton Wire Cloth Co.,** Clinton, Mass.

**Erdle Perforating Co.,** Rochester, N. Y.

**Harrington & King Perforating Co.,** 224 N. Union St., Chicago, Ill.

**Hendrick Mfg. Co.,** Carbondale, Pa.

**Manhattan Perforated Metal Co.,** 237 Centre St., New York.

**Chas. Mundi & Sons,** 441 Pearl St., N. Y.

**Brass Quadrants, Skylight—**

(See Quadrants, Brass Skylight.)

**Brass, Roll and Sheet—**

**Bridgeport Brass Co.,** 253 B'way, N. Y.

**U. T. Hungerford Brass & Copper Co.,** 497-505 Pearl St., New York.

**Homer F. Livermore,** Boston, Mass.

**Plume & Atwood Mfg. Co.,** Waterbury, Ct.

**Riverside Metal Co.,** Riverside, N. J.

**Arthur T. Rutter & Co.,** 256-257 Broadway, New York.

**Scovill Mfg. Co.,** Waterbury, Ct.

**Seymour Mfg. Co.,** Seymour, Ct.

**Waterbury Brass Co.,** Waterbury, Ct.

**Brass Rule, Printers'—**

**Riverside Metal Co.,** Riverside, N. J.

**Brass, Sheet—**

(See Brass, Roll and Sheet.)

**Brass Sheets, Platinum Plated—**

**Edwood Ivins Tube Works,** Oak Lane Sta., Philadelphia, Pa.

**Brass, Sign or Engravers'—**

**Bridgeport Brass Co.,** 253 B'way, N. Y.

**Riverside Metal Co.,** Riverside, N. J.

**Seymour Mfg. Co.,** Seymour, Ct.

**Brass, Spring—**

**Bridgeport Brass Co.,** 253 B'way, N. Y.

**Riverside Metal Co.,** Riverside, N. J.

**Seymour Mfg. Co.,** Seymour, Ct.

**Brass Valve Plates—**

(See Discs, Valve.)

**Brass, White—**

**Bridgeport Deoxidized Bronze & Metal Co.,** Bridgeport, Ct.

**Clum & Atkinson,** Rochester, N. Y.

**Paul S. Reeves & Son,** Philadelphia, Pa.

**Riverside Metal Co.,** Riverside, N. J.

**Brass Wood Screws—**

(See Screws, Wood.)

**Brass Working Tools—**

(See Tools, Brass Working.)

**Brasses, Cast—**

**Ohio Brass Co.,** Mansfield, O.

**Riverside Metal Co.,** Riverside, N. J.

**Brazers—**

(See Furnaces, Brazing.)

**Brazing Compound, Cast Iron and Steel—**

**F. R. Phillips & Sons Co.,** Pennsylvania Bldg., Philadelphia, Pa.

**Standard Mfg. Co.,** 203 S. Canal St., Chicago, Ill.

**Universal Fluxine Co.,** Urbana, O.

**Brazing Plates—**

**F. R. Phillips & Sons Co.,** Pennsylvania Bldg., Philadelphia, Pa.

**Brazing, to Order—**

**Globe Machine & Stamping Co.,** Cleveland, O.

**Otto Konigslow Mfg. Co.,** Cleveland, O.

**Whitlock Coil Pipe Co.,** Hartford, Ct.

**Bread and Cake Makers—**

(See Mixers, Dough.)

**Bread Baskets—**

(See Baskets, Bread.)

**Bread Coolers—**

(See Kitchen Articles, Wire.)

**Breakers, Circuit—**

**Electric Controller & Mfg. Co.,** Cleveland, O.

**Breakers, Ice—**

**Harrison Safety Boiler Works,** 3194 N. 17th St., Philadelphia, Pa.

**C. E. Jennings & Co.,** 42 Murray St., New York.

**North Bros. Mfg. Co.,** American St. & Lehigh Ave., Philadelphia, Pa.

**Breakers, Skull—**

**Thomas Carlin's Sons Co.,** N. S. Pittsburgh, Pa.

**Breaks, Peg—**

**Louis Sacks,** Newark, N. J.

**Breast Chains—**

(See Chains, Wagon and Fancy.)

**Breast Drills—**

(See Drills, Breast.)

**Brewery Machinery—**

**Bethlehem Foundry & Machine Co.,** South Bethlehem, Pa.

**Vilter Mfg. Co.,** Milwaukee, Wis.

**Brick Acid Proof—**

**American Refractories Co.,** Commercial National Bank Bldg., Chicago, Ill.

**Brick, Blast Furnace Linings—**

**American Refractories Co.,** Commercial National Bank Bldg., Chicago, Ill.



Brighton Fire Brick Co., New Brighton, Pa.

**Brick, Boiler Door, Arch and Jamb—**

Brighton Fire Brick Co., New Brighton, Pa.

**Brick, By-Product, Coke Oven—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

**Brick, Chemical Works—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

**Brick, Chisels, Drills, &c.—**  
(See Chisels, Drills, &c.)

**Brick, Chrome—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

**Brick, Fire—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

Cyrus Borgner, 23d St. above Race, Philadelphia, Pa.

Brighton Fire Brick Co., New Brighton, Pa.

J. Gilmour, Bennett Bldg., New York.

Henry Maurer & Son, 420 East 23d St., New York.

M. D. Valentine & Bro., Woodbridge, N. J.

#### MERCHANTS.

C. B. Houston & Co., Girard Trust Bldg., Philadelphia, Pa.

Jerome Keeley & Co., 421 Chestnut St., Philadelphia, Pa.

S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.

Shook & Fletcher, Birmingham, Ala.

**Brick, Glass Works—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

Brighton Fire Brick Co., New Brighton, Pa.

M. D. Valentine & Bro., Woodbridge, N. J.

**Brick, Hollow—**

Henry Maurer & Son., 420 East 23d St., New York.

**Brick, Locomotive—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

**Brick Machinery—**

Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.

Chambers Bros. Co., 52d St. below Lancaster Ave., Philadelphia, Pa.

Eastern Machinery Co., New Haven, Ct.

A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.

**Brick, Magnesite—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

**Brick, Open Hearth—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

**Brick, Rotary Cement Kiln—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

**Brick, Silica—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

**Brick, Steel Siding—**  
(See Ceiling and Siding, Iron and Steel.)

**Brick, Stove Fire—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

M. D. Valentine & Bro., Woodbridge, N. J.

**Bricks, Emery and Corundum—**

Monarch Emery & Corundum Wheel Co., Camden, N. J.

Vitrified Wheel Co., Westfield, Mass.

**Bricks, Salt, for Cattle—**

Irving Mfg. & Tool Co., 157 Chambers St., New York.

**Bridge Bolts, &c.—**  
(See Bolts.)

**Bridge Machinery—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

Bertsch & Co., Cambridge City, Ind.

Fawcus Machine Co., Pittsburgh, Pa.

Hanna Engineering Works, 840 Elston Ave., Chicago, Ill.

Hilles & Jones Co., Wilmington, Del.

J. J. McCabe, 14 Dey St., New York.

Niles-Cement-Pond Co., 111 Broadway, New York.

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

Vulcan Iron Works, 28 No. Irving Ave., Chicago, Ill.

#### MERCHANTS.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Marshall & Hushart Machinery Co., 62 S. Canal St., Chicago, Ill.

Motch & Merryweather Machinery Co., Cleveland, O.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

A. O. Walworth & Co., 143-147 Clinton St., Chicago, Ill.

**Bridge Pins—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Cleveland City Forge & Iron Co., Cleveland, O.

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Pennsylvania Forge Co., Philadelphia, Pa.

**Bridge Railing—**

Stewart Iron Works Co., Cincinnati, O.

**Bridge Rods—**  
(See Rods, Tie.)

**Bridges—**  
(See Buildings and Bridges.)

**Bridle Bits—**  
(See Bits, Bridle.)

**Brine Hooks—**  
(See Hooks, Brine.)

**Broaching Machines—**  
(See Presses, Broaching.)

**Broaching Tools—**

Lapointe Machine Tool Co., Hudson, Mass.

**Broilers—**

Kilbourne Mfg. Co., Troy, N. Y.

Fred J. Meyers Mfg. Co., Hamilton, O.

Parker Wire Goods Co., Worcester, Mass.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

Schneider & Trenkamp Division, American Stove Co., Cleveland, O.

Standard Wire Co., New Castle, Pa.  
Wire Goods Co., Worcester, Mass.

**Broilers, Electric—**  
General Electric Co., Schenectady, N. Y.

**Broilers, Gas—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.

**Brokers, Iron and Steel—**  
(See Iron and Steel Brokers and Merchants.)

**Bronze, Aluminum—**  
Bridgeport Brass Co., 253 B'way, N. Y.

**Bronze Bolts, Butts, &c—**  
(See Bolts, Butts, &c.)

**Bronze Forgings, Manganese—**  
(See Forgings, Manganese Bronze.)

**Bronze, Manganese—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Bridgeport Deoxidized Bronze & Metal Co., Bridgeport, Ct.

Crescent-Phosphorized Metal Co., Philadelphia, Pa.

Phosphor Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.

Paul S. Reeves & Son, Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.

**Bronze Metal—**  
Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

Bridgeport Brass Co., 253 B'way, N. Y.  
Mesta Machine Co., Pittsburgh, Pa.

Ohio Brass Co., Mansfield, O.  
Phosphor Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.

Paul S. Reeves & Son, Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.

Seymour Mfg. Co., Seymour, Ct.  
**Bronze, Phosphor—**  
Bethlehem Steel Co., So. Bethlehem, Pa.

Bridgeport Deoxidized Bronze & Metal Co., Bridgeport, Ct.

Crescent-Phosphorized Metal Co., Philadelphia, Pa.

Morgan Engineering Co., Alliance, O.  
Nolte Brass Co., Springfield, O.

Ohio Brass Co., Mansfield, O.  
Phosphor Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.

Paul S. Reeves & Son, Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.

**Bronze Rods—**  
(See Rods, Bronze.)

**Bronze, Roll and Sheet—**  
Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

Bridgeport Brass Co., 253 B'way, N. Y.  
Homer F. Livermore, Boston, Mass.

Phosphor Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.

Paul S. Reeves & Son, Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.

Seville Mfg. Co., Waterbury, Ct.  
Seymour Mfg. Co., Seymour, Ct.

Waterbury Brass Co., Waterbury, Ct.  
**Bronzes, Ornamental—**  
Ansonia Clock Co., 99 John St., N. Y.

Goodwin & Kintz Co., Winsted, Ct.  
**Broom Holders, Racks—**  
(See Household Articles, Wire.)

**Brooms, Brewers—**  
Osborn Mfg. Co., Cleveland, O.

**Brooms, Chisel Handle—**  
Osborn Mfg. Co., Cleveland, O.

**Brooms, Factory and Warehouse—**  
Osborn Mfg. Co., Cleveland, O.

**Brooms, Railroad, Snow and Switch—**

Osborn Mfg. Co., Cleveland, O.  
J. W. Paxson Co., 1021 No. Delaware Ave., Philadelphia, Pa.

**Brooms, Steel, Wire, Fiber, &c—**  
Osborn Mfg. Co., Cleveland, O.

J. W. Paxson Co., 1021 No. Delaware Ave., Philadelphia, Pa.

**Brooms, Track—**  
Osborn Mfg. Co., Cleveland, O.

**Brush Sets, Silver Plated—**  
International Silver Co., Meriden, Ct.

**Brushes, Billiard Table—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Butchers', Packers—**  
John Chatillon & Son, 85 Cliff St., N. Y.

Osborn Mfg. Co., Cleveland, O.  
**Brushes, Carbon Commutator—**

Crocker-Wheeler Co., Amper, N. J.  
General Electric Co., Schenectady, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Brushes, Counter or Bench—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Deck Scrub—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Dye—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Electroplating—**  
Hanson & Van Winkle Co., Newark, N. J.

Osborn Mfg. Co., Cleveland, O.  
Zucker & Levett & Loeb Co., 526-530 West 51st St., New York.

**Brushes, Foundry—**  
Fred J. Meyers Mfg. Co., Hamilton, O.

S. Obermayer Co., Cincinnati, O.  
Osborn Mfg. Co., Cleveland, O.

Louis Sacks Foundry Co., Newark, N. J.  
Western Foundry Supply Co., 50 Church St., New York.

**Brushes, Furnace and Heater—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Graphite Commutator—**  
Joseph Dixon Crucible Co., Jersey City.

**Brushes, Machine—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Painters' Wire Scratch—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Pipe—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Platers—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Railroad—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Rubber Bath—**  
Springfield Tire & Rubber Co., Springfield, O.

Osborn Mfg. Co., Cleveland, O.  
**Brushes, Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Brushes, Sink—**  
(See Cleaners, Sink.)

**Brushes, Steel Wire—**  
Edward Darby & Sons, 233 Arch St., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

S. Obermayer Co., Cincinnati, O.

Osborn Mfg. Co., Cleveland, O.

**J. W. Paxson Co.**, 1021 N. Delaware Ave., Philadelphia, Pa.

**Brushes, Tumbler—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Whitewash, Horse, Shoe, &c.—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Window—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Wire, Casting, Gearing, Flue, &c.—**  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Estey Wire Works Co., 59 Fulton St. N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Osborn Mfg. Co., Cleveland, O.

**Brushes, Wire, Horse, Hair, Cattle, &c.—**  
Osborn Mfg. Co., Cleveland, O.

**Brushes, Wire Wheel—**  
S. Obermayer Co., Cincinnati, O.

Osborn Mfg. Co., Cleveland, O.

**Bucket Lips and Teeth—**  
Taylor Iron & Steel Co., High Bridge, N. J.

**Buckets and Cups, Elevator—**  
Avery Stamping Co., Cleveland, O.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

H. W. Caldwell & Son Co., Western Ave. 142-164 W. North Ave., Chicago, Ill.

W. E. Caldwell Co., Louisville, Ky.

W. J. Clark Co., Salem, O.

Dodge Mfg. Co., Mishawaka, Ind.

Gifford-Wood Co., Arlington, Mass.

Hendrick Mfg. Co., Carbondale, Pa.

C. W. Hunt Co., West New Brighton, N. Y.

Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Philadelphia, Pa.

Shannon Engineering & Contracting Co., Pittsburgh, Pa.

**Buckets, Chain Pump, Rubber—**  
Cleveland Galvanizing Works Co., Cleveland, O.

Crouk & Carrier Mfg. Co., Elmira, N. Y.

**Buckets, Clam Shell—**  
American Steel Foundries, 42 Broadway, New York.

Browning Engineering Co., Cleveland, O.

Interstate Engineering Co., Bedford, O.

Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Northern Engineering Works, Detroit, Mich.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey, Ill.

**Buckets, Dredge—**  
Industrial Supply & Equipment Co., 407 Sanson St., Philadelphia, Pa.

Interstate Engineering Co., Bedford, O.

Iron & Steel Co., High Bridge, N. J.

Webster Mfg. Co., 1075 W. 15th St., Chicago, Ill.

**Buckets, Elevator Pump—**  
Cleveland Galvanizing Works, Cleveland, O.

**Buckets, Factory—**  
W. J. Clark Co., Salem, O.

Dover Stamping & Mfg. Co., Cambridge, Mass.

Gem Mfg. Co., Boston, Mass.

S. Obermayer Co., Cincinnati, O.

Osborn Mfg. Co., Cleveland, O.

**Buckets, Fire—**  
W. J. Clark Co., Salem, O.

Johnson Mfg. Co., Urbana, O.

Steel Basket Co., Cedar Rapids, Ia.

**Buckets, Foundry—**  
(See Pails, Foundry.)

**Buckets, Grab—**  
Browning Engineering Co., Cleveland, O.

Interstate Engineering Co., Bedford, O.

Jeffrey Mfg. Co., Columbus, O.

**Buckets, Grease—**  
Gem Mfg. Co., Pittsburgh, Pa.

**Buckets, Hoisting—**  
Brown Hoisting Machinery Co., Cleveland, O.

Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.

W. J. Clark Co., Salem, O.

Hendrick Mfg. Co., Carbondale, Pa.

C. W. Hunt Co., West New Brighton, N. Y.

Interstate Engineering Co., Bedford, O.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Arthur Koppel Co., Pittsburgh, Pa.

Link-Belt Co., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Northern Engineering Works, Detroit, Mich.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

Steel Basket Co., Cedar Rapids, Ia.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey, Ill.

**Buckets, Morfar—**  
Steel Basket Co., Cedar Rapids, Ia.

**Buckets, Ore and Coal—**  
Brown Hoisting Machinery Co., Cleveland, O.

Browning Engineering Co., Cleveland, O.

H. W. Caldwell & Son Co., Western Ave. 142-164 W. North Ave., Chicago, Ill.

W. J. Clark Co., Salem, O.

Hendrick Mfg. Co., Carbondale, Pa.

Interstate Engineering Co., Bedford, O.

Jeffrey Mfg. Co., Columbus, O.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Arthur Koppel Co., Pittsburgh, Pa.

Link-Belt Co., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Northern Engineering Works, Detroit, Mich.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

Steel Basket Co., Cedar Rapids, Ia.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey, Ill.

Ernst Wiener Co., Church and Fulton Sts., New York.

Youngstown Car Mfg. Co., Youngstown, Ohio.

**Buckets, Pump—**  
F. E. Myers & Bros., Ashland, O.

**Buckets, Sand—**  
Johnson Mfg. Co., Urbana, O.

**Buckets, Self Dumping—**  
Atlas Car & Mfg. Co., Cleveland, O.  
Brown Hoisting Machinery Co., Cleveland.  
Browning Engineering Co., Cleveland, O.  
Byram & Co., Detroit, Mich.  
W. J. Clark Co., Salem, O.  
E. H. Evans, Brooklyn, N. Y.  
O. W. Hunt Co., West New Brighton, N. Y.

Arthur Koppel Co., Pittsburgh, Pa.  
Link-Belt Co., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Northern Engineering Works, Detroit, Mich.

Steel Basket Co., Cedar Rapids, Ia.  
Syracuse Chilled Plow Co., Syracuse, N. Y.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
Whiting Foundry Equipment Co., Harvey, Ill.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Buckets, Stable—**  
American Woodware Mfg. Co., Toledo, O.

**Buckets, Tar—**  
W. J. Clark Co., Salem, O.

**Buckets, Tote—**  
W. J. Clark Co., Salem, O.

**Buckets, Water—**  
American Woodware Mfg. Co., Toledo, O.

Johnson Mfg. Co., Urbana, O.  
Steel Basket Co., Cedar Rapids, Ia.

**Buckets, Well—**  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
Richmond Cedar Works, Richmond, Va.

**Buckle Machinery, Wire—**  
Baird Machine Co., Oakville, Ct.  
E. J. Manville Machine Co., Waterbury, Ct.

**Buckle Plates—**  
American Bridge Co. of New York, 30 Church St., New York.

**Buckles, Arctic—**  
Judson L. Thomson Mfg. Co., Waltham, Mass.

**Buckles, Automobile and Carriage Top—**  
North & Judd Mfg. Co., New Britain, Ct.

**Buckles, Back Band—**  
Stanley Works, New Britain, Ct.

**Buckles, Bale Tie—**  
Acme Steel Goods Co., 2334-2340 Archer Ave., Chicago, Ill.

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Buckles, Belt, Men's and Women's—**  
North & Judd Mfg. Co., New Britain, Ct.

**Buckles, Coat—**  
Judson L. Thomson Mfg. Co., Waltham, Mass.

**Buckles, Pipe—**  
Samuel Hall's Sons, 229-233 W. 10th St., New York.

**Buckles, Shoe—**  
North & Judd Mfg. Co., New Britain, Ct.  
Judson L. Thomson Mfg. Co., Waltham, Mass.

**Buckles, Trunk and Bag—**  
R. C. Jenkinson & Co., Newark, N. J.  
Judson L. Thomson Mfg. Co., Waltham, Mass.

**Buckles, Wire—**  
Spencer Wire Co., Worcester, Mass.

**Bucks, Wood Saw—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.

**Buffer Steels—**  
(See Steels, Buffer and Scraper.)

**Buffers, Horseshoers'—**  
Heller Bros. Co., Newark, N. J.

**Buffing and Polishing Machines—**  
American Blower Co., Detroit, Mich.  
C. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.  
J. C. Blount Co., Everett, Mass.  
Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Builders Iron Foundry, Providence, R. I.  
Cincinnati Electrical Tool Co., Cincinnati, O.  
Diamond Machine Co., Providence, R. I.  
Excelsior Tool & Machine Co., East St. Louis, Ill.  
Fox Machine Co., Grand Rapids, Mich.  
Garvin Mch. Co., Spring and Varick Sts., New York.  
Goodell-Pratt Co., Greenfield, Mass.  
Hanson & Van Winkle Co., Newark, N. J.  
W. H. Leland & Co., Worcester, Mass.  
New Britain Machine Co., New Britain, Ct.  
Northampton Emery Wheel Co., Leeds, Mass.  
Ransom Mfg. Co., Oshkosh, Wis.  
Safety Emery Wheel Co., Springfield, O.  
Springfield Mfg. Co., Bridgeport, Ct.  
Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.  
United States Electrical Tool Co., Cincinnati, O.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
Webster & Perks Tool Co., Springfield, O.  
Zucker & Levett & Loeb Co., 526-530 West 25th St., New York.

MERCHANTS.

Hannan-Finton Co., Springfield, Mass.  
Hill, Clarke & Co., Boston, Mass.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co., Cleveland, O.  
Prentiss Tool & Supply Co., 115 Liberty St., New York.  
F. P. Schielein Machinery Co., Pittsburgh, Pa.  
Sterling Emery Wheel Mfg. Co., Tiffin, O.  
H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.  
Vandyck-Churchill Co., 8 Dey St., N. Y.  
A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
Wicks Bros., Saginaw, Mich.  
C. C. Wormer Machinery Co., Detroit, Mich.

**Buffing and Polishing Machines, Electrical—**  
Bridgeport Safety Emery Wheel Co., Inc.,  
Bridgeport, Ct.

Gem Mfg. Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

**Buffing Supplies—**  
(See Polishing and Buffing Supplies.)

**Bufs—**  
Diamond Machine Co., Providence, R. I.  
Hanson & Van Winkle Co., Newark, N. J.  
Zucker & Levett & Loeb Co., 526-530 West 25th St., New York.

**Buggies, Ore. Coal. Cinder, &c.—**

Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.  
Hendrick Mfg. Co., Carbondale, Pa.  
Sheffield Car Co., Three Rivers, Mich.

**Buggies, Timber—**  
(See Dollies, Timber.)

**Buggies, Wire—**  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Buggy Seats, Folding—**  
(See Seats, Buggy, Third.)

**Builders' Hardware, to Order—**

Boston Pressed Metal Co., Worcester, Mass.  
Worcester Pressed Steel Co., Worcester, Mass.

**Building Fronts—**  
(See Fronts, Building, Sheet Metal.)

**Building Material, Fire Proof—**

Indestructible Metal Co., 50 Church St., New York.  
Henry Maurer & Son, 420 East 23d St., New York.

**Buildings and Bridges—**

American Bridge Co. of New York, 30 Church St., New York.  
Baltimore Bridge Co., Baltimore, Md.  
Belmont Iron Works, Inc., Philadelphia.  
Berlin Construction Co., Berlin, Ct.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Boston Bridge Works, Boston, Mass.  
Ruell & Mitchell, 120 Liberty St., N. Y.  
Carnegie Steel Co., Pittsburgh, Pa.  
Forest City Steel & Iron Co., Cleveland, O.

Interstate Engineering Co., Bedford, O.  
Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.

W. N. Kratzer & Co., Pittsburgh, Pa.  
McClintic-Marshall Construction Co., Pittsburgh, Pa.

National Iron & Wire Co., Cleveland, O.  
Phoenix Iron Co., 410 Walnut St., Philadelphia, Pa.

Riter-Conley Mfg. Co., Pittsburgh, Pa.  
Wm. B. Seafie & Sons Co., Pittsburgh, Pa.  
Lewis F. Shoemaker & Co., Harrison Bldg., Philadelphia, Pa.

Stewart Iron Works Co., Cincinnati, O.  
Van Dorn Iron Works Co., Cleveland, O.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Volkmer & Co., Pittsburgh, Pa.

**Buildings, Election Booth—**

Forest City Steel & Iron Co., Cleveland, O.

Van Dorn Iron Works Co., Cleveland, O.

**Bulbs, Plumbers' Furnace—**  
H. O. Canfield Co., Bridgeport, Ct.

**Bull Leaders, Rings—**  
(See Leaders, Rings.)

**Bulldozers—**

Ajax Mfg. Co., Cleveland, O.  
E. W. Elias Co., Brooklyn, N. Y.  
Chambersburg Engineering Co., Chambersburg, Pa.

Hilles & Jones Co., Wilmington, Del.  
Long & Allstatter Co., Hamilton, O.  
National Machinery Co., Tiffin, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

Williams, White & Co., Moline, Ill.

**MERCHANTS—**  
W. B. Beatty Machinery & Equipment Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

F. P. Schlelein Machinery Co., Pittsburgh, Pa.

Scully Steel & Iron Co., 69 No. Halsted St., Chicago, Ill.

**Bulldozers, Hydraulic—**  
Chambersburg Engineering Co., Chambersburg, Pa.

**Bull's, Dead, Eyes, &c.—**  
(See Eyes, Dead, Bull's, &c.)

**Bull's Eyes or Lizards, Floor—**

W. & J. Tiebout, 118 Chambers St., N. Y.

**Bumpers and Springs, Rubber—**

New York Belting & Packing Co., 91-93 Chambers St., New York.  
Springfield Tire & Rubber Co., Springfield, O.

**Bumpers, Screw—**

H. O. Canfield Co., Bridgeport, Ct.

**Bung Head Bolts—**  
(See Bolts, Special.)

**Bung Hole Borers—**  
(See Borers, Bung Hole.)

**Bung Starters—**  
(See Starters, Bung.)

**Bungalows, Portable—**  
(See Houses, Portable.)

**Bungs, Oil Can—**  
Taylor & Boggis Foundry Co., Cleveland, O.

**Buoys, Gas, Welded—**  
American Welding Co., Carbondale, Pa.

**Buoys, Seamless Welded—**  
American Welding Co., Carbondale, Pa.

**Burglar Proof Door Secures—**  
(See Fasteners, Door, Burglar Proof.)

**Burglar Proof Vaults—**  
(See Vaults, Fire and Burglar Proof.)

**Burners, Core Oven—**  
Monarch Engineering & Mfg. Co., Baltimore, Md.

Emil E. Steiner, Newark, N. J.

**Burners, Fuel, Oil or Tar—**  
Clayton Air Compressor Works, 114-118 Liberty St., New York.

Globe Machine & Stamping Co., Cleveland, O.

Lunkenheimer Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Monarch Engineering & Mfg. Co., Baltimore, Md.

Petroleum Iron Works Co., Sharon, Pa.  
Tate, Jones & Co., Inc., Pittsburgh, Pa.

**Burners, Gas—**  
Hess-Snyder Co., Massillon, O.  
Holtzer-Cabot Electric Co., Boston, Mass.  
Schneider & Trenkamp Division, American  
Stove Co., Cleveland, O.  
Scovill Mfg. Co., Waterbury, Ct.  
Emil E. Steiner, Newark, N. J.  
Tate, Jones & Co., Inc., Pittsburgh, Pa.  
Turner Brass Works, Sycamore, Ill.  
**Burners, Gasoline Stove—**  
Niagara Machine & Tool Works, Buffalo,  
N. Y.

Schneider & Trenkamp Division, American  
Stove Co., Cleveland, O.

**Burners, Hydro-Carbon—**  
Turner Brass Works, Sycamore, Ill.

**Burners, Kerosene Lamp—**  
Bridgeport Brass Co., 253 Broadway, N.Y.  
Globe Machine & Stamping Co., Cleve-  
land, O.

Plume & Atwood Mfg. Co., Waterbury,  
Ct.  
Scovill Mfg. Co., Waterbury, Ct.

**Burners, Kerosene, Heat-  
ing—**

Clark Novelty Co., Rochester, N. Y.  
**Burners, Natural Gas—**

Monarch Engineering & Mfg. Co., Balti-  
more, Md.

Tate, Jones & Co., Inc., Pittsburgh, Pa.

**Burners, Paint—**  
Schneider & Trenkamp Div., Am. Stove  
Co., Cleveland, O.

Turner Brass Works, Sycamore, Ill.

**Burners, Rubbish—**  
Standard Wire Co., New Castle, Pa.

**Burning Brands—**  
(See Brands, Burning.)

**Burnishers, Cabinet Mak-  
ers—**

Buck Bros., Millbury, Mass.  
Tuck Mfg. Co., Brockton, Mass.

**Burnishers, Electric Driv-  
en—**

Coates Clipper Mfg. Co., Worcester, Mass.  
**Burring and Sawing Ma-  
chines—**

Ajax Mfg. Co., Cleveland, O.  
**Burring Machines, Nut—**

Acme Machinery Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

National Machinery Co., Tiffin, O.

**Burrs, Copper—**  
(See Rivets and Burrs, Copper.)

**Burrs, Riveting—**  
(See Burrs, Steel.)

**Burrs, Steel—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Screw Co., Providence, R. I.

Atlas Bolt & Screw Co., Cleveland, O.  
Bettcher Mfg. Co., Cleveland, O.

Cobb & Drew, Inc., Plymouth, Mass.  
Falls Rivet & Machine Co., Cuyahoga  
Falls, O.

Grand Crossing Tack Co., Grand Crossing,  
Ill.

Samuel Hall's Sons, 229-233 W. 10th St.,  
New York.

R. C. Jenkinson & Co., Newark, N. J.  
McKinney Mfg. Co., Allegheny, Pa.

H. A. Matthews Mfg. Co., Seymour, Ct.  
Reed & Prince Mfg. Co., Worcester, Mass.

J. H. Sessions & Son, Bristol Ct.  
Stanley Works, New Britain, Ct.  
Tower Mfg. Co., Cincinnati, O.

Wrought Washer Mfg. Co., Milwaukee,  
Wis.

(See also Washers, Wrought.)  
**Bush Hooks—**  
(See Hooks, Bush.)

**Bushed Chains—**  
(See Chains, Bushed.)

**Bushings, Dredge—**

Link-Belt Co., Inc., Philadelphia, Pa.  
Taylor Iron & Steel Co., High Bridge,  
N. J.

**Bushings, Expansion, for  
Milling Machines—**

Brown & Sharpe Mfg. Co., Providence,  
R. I.

**Bushings for Automobile  
and Marine Engines—**

Phosphor-Bronze Smelting Co., Ltd., 2200  
Washington Ave., Philadelphia, Pa.

F. W. Spacks Machine Co., Indianapolis,  
Ind.

**Bushings, Loose Pulley—**  
Bancroft & Co., Philadelphia, Pa.

**Bushings, Loose Pulley, Oil-  
less—**

North American Metaline Co., Long  
Island City, N. Y.

**Bushings, Pine, Brass—**  
Lunkenheimer Co., Cincinnati, O.

**Bushings, Pulley—**

Bancroft & Co., Philadelphia, Pa.  
Dodge Mfg. Co., Mishawaka, Ind.

Krieger Tool & Mfg. Co., 83 W. Ran-  
dolph St., Chicago, Ill.

Thomas Laughlin Co., Portland, Me.  
Paul S. Reeves & Son, 14-15 Catherine  
St., Philadelphia, Pa.

**Bushings, Pulley Block  
Sheave—**

Boston & Lockport Block Co., East Bos-  
ton, Mass.

North American Metaline Co., Long  
Island City, N. Y.

**Bushings, Trolley Wheel—**  
H. B. Ives Co., New Haven, Ct.

**Butcher Cleavers, Knives,  
&c.—**

(See Cleavers, Knives, &c.)  
**Butchers' Tinware—**  
(See Tinware, Butchers.)

**Butchers' Tools—**  
(See Tools, Butchers.)

**Butt and Rabbit Gauges—**  
(See Gauges, Butt and Rabbit.)

**Butt Hinge Machinery,  
Brass—**

(See Hinge Machinery, Automatic.)  
**Butt Milling and Drilling  
Machines—**

(See Milling and Drilling Machines,  
Butt.)

**Butter Dishes—**  
(See Dishes, Silver Plated.)

**Butterblisks, Blacksmiths—**  
Wells Bros. Co., Greenfield, Mass.

**Butting Saws—**  
(See Saws, Mill, &c.)

**Button Back Machinery—**  
Adriance Machine Works, Brooklyn, N. Y.

W. W. Bliss Co., Brooklyn, N. Y.  
Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

Zeh & Hahemann Co., Newark, N. J.

**Button Head Bolts—**  
(See Bolts, Special.)

**Button Hole Cutters—**

(See Cutters, Button Hole.)

**Button Hooks—**

(See Hooks, Button.)

**Button Machinery—**

Baird Machine Co., Oakville, Ct.  
 Ferracute Machine Co., Bridgeton, N. J.  
 Gould & Eberhardt, Newark, N. J.  
 Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
 Zeh & Hahnemann Co., Newark, N. J.

**Button Machinery, Metal—**

E. W. Bliss Co., Brooklyn, N. Y.

**Buttons, Door—**

Arcade Mfg. Co., Freeport, Ill.  
 Ney Mfg. Co., Canton, O.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 W. & J. Tiebout, 118 Chambers St., N. Y.

**Buttons, Garment, Metal—**

Scovill Mfg. Co., Waterbury, Ct.

**Buttons, Push—**

Holtzer-Cabot Electric Co., Boston, Mass.  
 W. R. Ostrander & Co., 22 Dey St., N. Y.  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

I. S. Spencer's Sons, Guilford, Ct.  
 Union Hardware Co., Torrington, Ct.  
 Yale & Towne Mfg. Co., 9 Murray St., New York.

**Butts and Hinges, Brass—**

Plume &amp; Atwood Mfg. Co., Waterbury, Ct.

Reading Hardware Co., Reading, Pa.  
 C. J. Root Co., Bristol, Ct.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 Scovill Mfg. Co., Waterbury, Ct.

**Butts, Ball Bearing—**

Stanley Works, New Britain, Ct.

**Butts, Bronze—**

Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Butts, Cast Brass—**

W. &amp; J. Tiebout, 118 Chambers St., N. Y.

**Butts, Cast Iron—**

Peck, Stow &amp; Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Butts, Spring—**

Bommer Bros., Brooklyn, N. Y.  
 Chicago Spring Butt Co., Chicago, Ill.  
 Shelby Spring Hinge Co., Shelby, O.

**Butts, Table—**

(See Butts, Wrought Steel.)

**Butts, Wrought Steel—**

Griffin Mfg. Co., Erie, Pa.  
 Lawrence Bros., Sterling, Ill.  
 McKinney Mfg. Co., Allegheny, Pa.  
 National Mfg. Co., Sterling, Ill.  
 Reading Hardware Co., Reading, Pa.  
 Stanley Works, New Britain, Ct.

**Buzz Planers—**

(See Planers, Buzz.)

**Cabinet Clamps, &c.—**

(See Clamps, &amp;c.)

**Cabinet Hardware—**

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Cabinet Hinges—**

Griffin Mfg. Co., Erie, Pa.  
 National Mfg. Co., Sterling, Ill.  
 Reading Hardware Co., Reading, Pa.  
 Stanley Works, New Britain, Ct.

**Cabinet Machinery—**

Hobbs Mfg. Co., Worcester, Mass.

**Cabinet Saws—**

(See Saws, Turning, Felloe, &amp;c.)

**Cabinets, Bicycle Extras—**

J. D. Warren Mfg. Co., Chicago, Ill.

**Cabinets, Blue Print—**

A. G. Butler, 284-286 Pearl St., N. Y.

**Cabinets, Card, Steel—**

W. J. Clark Co., Salem, O.

**Cabinets, Electrottype, &c.—**

A. G. Butler, 284-286 Pearl St., New York.

**Cabinets, Filing and Stationery—**

W. J. Clark Co., Salem, O.

**Cabinets, Hack Saw Blade—**

J. D. Warren Mfg. Co., Chicago, Ill.  
 Massachusetts Saw Works, Chicopee, Mass.

**Cabinets, Hardware Store—**

W. C. Heller &amp; Co., Montpelier, O.

**Cabinets, Medicine—**

J. D. Warren Mfg. Co., Chicago, Ill.

**Cabinets, Pot and Kettle Cover—**

Arcade Mfg. Co., Freeport, Ill.

**Cabinets, Pot and Kettle Cover—**

Lasher Mfg. Co., Davenport, Ia.

**Cabinets, Screw and Bolt—**

(See Cases, Screw and Bolt.)

**Cabinets, Steel—**

W. J. Clark Co., Salem, O.  
 Terrell's Equipment Co., Grand Rapids, Mich.

**Cabinets, Tool—**

(See Chests and Cabinets, Tool.)

**Cable Chain—**

(See Chain, Crane, Cable, &amp;c.)

**Cable, Hoisting—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Broderick & Bascom Rope Co., St. Louis.  
 A. Leschen & Sons Rope Co., St. Louis.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

**Cable Machinery, Wire—**

Farrel Foundry & Machine Co., Ansonia, Ct.

Thomas Prosser & Son, 26 Platt St., N. Y.

**Cable Railroads—**

(See Conveying Machinery.)

**Cable Railway Machinery—**

C. W. Hunt Co., West New Brighton, N. Y.

A. Leschen & Sons Rope Co., St. Louis.  
 Lidgerwood Mfg. Co., 96 Liberty St., N. Y.

Poole Engineering & Machine Co., Baltimore, Md.

Robins Conveying Belt Co., Park Row Bldg., New York.

Shannon Engineering & Contracting Co., Pittsburgh, Pa.

**Cable Terminals—**

(See Terminals, Cable.)

**Cable's Outfits—**

Heath Foundry &amp; Mfg. Co., Plymouth, O.

**Cables, Electrical—**  
(See Wires, Electrical.)  
**Cables, Insulated Copper—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
**Hazard Mfg. Co., Wilkes-Barre, Pa.**  
**Cables, Lead Covered Paper**  
**Insulated—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
**Cables, Oil Well Drilling—**  
American Mfg. Co., 55 Wall St., New  
York.  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
**Plymouth Cordage Co., North Plymouth,**  
**Mass.**  
**Williamsport Wire Rope Co., Williams-**  
**port, Pa.**  
**Cables, Sub-Marine—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
**Cables, Varished Cambrie**  
**Insulated—**  
General Electric Co., Schenectady, N. Y.  
**Cableways, Marine—**  
Lidgerwood Mfg. Co., 96 Liberty St., New  
York.  
**Cableways, Wire—**  
(See Tramways, Wire Rope.)  
**Cadgers, Miners', Steel—**  
Gem Mfg. Co., Pittsburgh, Pa.  
**Cages, Animal—**  
Dufur & Co., Baltimore, Md.  
Glen Mfg. Co., Ellwood City, Pa.  
Andrew B. Hendryx Co., New Haven, Ct.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
**Cages, Bird, Brass, Enam-**  
**eled and Japanned—**  
Dufur & Co., Baltimore, Md.  
Glen Mfg. Co., Ellwood City, Pa.  
Andrew B. Hendryx Co., New Haven, Ct.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
**Cages, Bird, Wooden—**  
Dufur & Co., Baltimore, Md.  
**Cages, Cashier and Teller,**  
**Bank—**  
Buffalo Wire Works Co., Inc., Buffalo,  
N. Y.  
W. S. Tyler Co., Cleveland, O.  
Wright Wire Co., Worcester, Mass.  
**Calissons, Steel—**  
American Welding Co., Carbondale, Pa.  
Petroleum Iron Works Co., Sharon, Pa.  
Riter-Conley Mfg. Co., Pittsburgh, Pa.  
Wm. B. Scaife & Sons Co., Pittsburgh,  
Pa.  
**Cake Baskets—**  
(See Baskets, Bread or Cake.)  
**Cake Coolers—**  
(See Coolers.)  
**Cake Turners, &c.—**  
(See Turners, &c.)  
**Calculating Machines—**  
(See Adding, Computing and Reckoning  
Machines.)  
**Caldrons—**  
Stuart & Peterson Co., Burlington, N. J.  
(See also Kettles, Sugar.)  
**Calendars, Silver Plated—**  
(See Desk Specialties.)  
**Calendering Machines, Pa-**  
**per—**  
Farrel Foundry & Mach. Co., Ansonia, Ct.

**Caliper and Divider, Com-**  
**bined—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.  
**Calipers—**  
Billings & Spencer Co., Hartford, Ct.  
Brown & Sharpe Mfg. Co., Providence,  
R. I.  
Goodell-Pratt Co., Greenfield, Mass.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.  
Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.  
L. S. Starrett Co., Athol, Mass.  
**Calipers, Decimal Log—**  
Humphrey Machine Co., Keene, N. H.  
**Calipers, Gear Tooth—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.  
**Calipers, Log—**  
Lufkin Rule Co., Saginaw, Mich.  
**Calipers, Micrometer—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.  
Goodell-Pratt Co., Greenfield, Mass.  
Schuchardt & Schutte, 90 West St., N. Y.  
J. T. Slocomb Co., Providence, R. I.  
L. S. Starrett Co., Athol, Mass.  
**Calipers, Pocket Slide—**  
L. S. Starrett Co., Athol, Mass.  
**Calipers, Vernier—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.  
Schuchardt & Schutte, 90 West St., N. Y.  
**Calking Material—**  
Estes Mills, Fall River, Mass.  
**Calking Irons, Mallets—**  
(See Irons, Mallets.)  
**Calking Tools, Pneumatic**  
**Boiler—**  
Chicago Pneumatic Tool Co., Fisher  
Bldg., Chicago, Ill.  
Stow Flexible Shaft Co., 26th and Callow-  
hill Sts., Philadelphia, Pa.  
**Calks, Boot—**  
Lufkin Rule Co., Saginaw, Mich.  
Louis Sacks, Newark, N. J.  
North & Fleiffer Mfg. Co., New Britain,  
Ct.  
**Calks, Horseshoe, Remova-**  
**ble—**  
Jos. Reynolds Mfg. Co., New Haven, Ct.  
**Calks, Toe, Horseshoe—**  
American Horse Shoe Co., Phillipsburg,  
N. J.  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
P. F. Burke, South Boston, Mass.  
Kilborn & Bishop Co., New Haven, Ct.  
Rhode Island Perkins Horse Shoe Co.,  
Providence, R. I.  
**Call Bells—**  
(See Bells, Tea and Call.)  
**Calls, Dog—**  
Waterbury Brass Co., Waterbury, Ct.  
**Calorimeters—**  
American Steam Gauge & Valve Mfg.  
Co., Boston, Mass.  
Eimer & Amend, 205 Third Ave., N. Y.  
**Cam Cutting Attachments—**  
(See Cutting Attachments, Cam.)  
**Cam Cutting Machines—**  
Becker Milling Machine Co., Hyde Park,  
Mass.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.



Niles-Bement-Pond Co., 111 Broadway,  
New York.

### **Cambering Machines, for Rails—**

United Engineering & Foundry Co., Pitts-  
burgh, Pa.

### **Camp Stools—**

(See Stools, Camp.)

### **Can Faucets—**

(See Faucets.)

### **Can Machinery, Automatic—**

E. W. Bliss Co., Brooklyn, N. Y.  
Consolidated Press & Tool Co., Hastings,  
Mich.

### **Can Makers' Dies—**

(See Dies, Can Makers'.)

### **Can Making Machinery—**

Adriance Machine Works, Brooklyn N. Y.  
Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Consolidated Press & Tool Co., Hastings,  
Mich.

Ferracute Machine Co., Bridgeton, N. J.

Jeffrey Mfg. Co., Columbus, O.

Chas. Leffler & Co., Brooklyn, N. Y.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Niagara Machine & Tool Works, Buffalo.

Fred J. Swaine Co., St. Louis, Mo.

### **Can Making Machinery.**

### **Sheet Metal—**

E. W. Bliss Co., Brooklyn, N. Y.

### **Can Openers—**

(See Openers, Can.)

### **Candelabra—**

(See Candlesticks and Candelabra.)

### **Candle Wicking—**

(See Wick, Candle.)

### **Candlesticks—**

New York Stamping Co., Brooklyn, N. Y.

### **Candlesticks and Candel- abra—**

Ansonia Clock Co., 99 John St., N. Y.

Goodwin & Kintz Co., Winsted, Ct.

International Silver Co., Meriden, Ct.

### **Candlesticks, Miners'—**

Ludlow-Saylor Wire Co., St. Louis, Mo.

### **Candy Pans, Scales, Scoops—**

(See Pans, Scales, Scoops.)

### **Cane Knives—**

(See Knives, Cane.)

### **Canisters and Caddies, Coffee and Tea—**

New York Stamping Co., Brooklyn, N. Y.

### **Canners, Fruit—**

Gem Mfg. Co., Boston, Mass.

### **Cannons, Yacht—**

Barney & Berry, Springfield, Mass.

### **Canoes, Iron—**

(See Iron Work, Builders.)

### **Cans, Ash and Garbage—**

W. J. Clark Co., Salem, O.

Dover Stamping & Mfg. Co., Cambridge,  
Mass.

Gem Mfg. Co., Boston, Mass.

Steel Basket Co., Cedar Rapids, Ia.

### **Cans, Elevator—**

Fred J. Meyers Mfg. Co., Hamilton, O.

### **Cans, Factory—**

Steel Basket Co., Cedar Rapids, Ia.

### **Cans, Galvanized Iron—**

Steel Basket Co., Cedar Rapids, Ia.

### **Cans, Ice Cream—**

Stuart & Peterson Co., Burlington, N. J.

### **Cans, Ice Cream Packing—**

Alaska Freezer Co., Winchendon, Mass.

Sturges & Burn Mfg. Co., Chicago, Ill.

### **Cans, Ice, Galvanized Iron—**

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

### **Cans, Milk—**

Dover Stamping & Mfg. Co., Cambridge,  
Mass.

Gem Mfg. Co., Boston, Mass.

Lalance & Grosjean Mfg. Co., 299 Broad-  
way, New York.

Charles Millar & Son Co., Utica, N. Y.

Sturges & Burn Mfg. Co., Chicago, Ill.

### **Cans, Oil and Gasoline—**

American Tube & Stamping Co., Bridge-  
port, Ct.

Delphos Mfg. Co., Delphos, O.

Dover Stamping & Mfg. Co., Cambridge,  
Mass.

Johnson Mfg. Co., Urbana, O.

Northwestern Consolidated Iron & Steel  
Mfg. Co., Burlington, Ia.

### **Cans, Oily Waste—**

W. J. Clark Co., Salem, O.

Delphos Mfg. Co., Delphos, O.

Dover Stamping & Mfg. Co., Cambridge,  
Mass.

Gem Mfg. Co., Boston, Mass.

Steel Basket Co., Cedar Rapids, Ia.

### **Cans, Paint and Varnish—**

American Tube & Stamping Co., Bridge-  
port, Conn.

### **Cans, Refuse—**

Dover Stamping & Mfg. Co., Cambridge,  
Mass.

Steel Basket Co., Cedar Rapids, Ia.

### **Cans, Roving—**

Gem Mfg. Co., Boston, Mass.

### **Cans, Sprinkling—**

Dover Stamping & Mfg. Co., Cambridge,  
Mass.

### **Cans, Squirt—**

Johnson Mfg. Co., Urbana, O.

### **Cans, Steel, Perforated Bot- tom—**

Steel Basket Co., Cedar Rapids, Ia.

### **Cans, Tin—**

Eastern Machine & Stamping Co., Provi-  
dence, R. I.

### **Cans, Train Water—**

Johnson Mfg. Co., Urbana, O.

### **Cans, Water, Wooden—**

Richmond Cedar Works, Richmond, Va.

### **Cant Hooks—**

(See Hooks, Cant.)

### **Cap Screws—**

(See Screws, Cap and Set.)

### **Cape Chisels—**

(See Chisels, Cape.)

### **Capitals—**

(See Architectural Sheet Metal Work.)

### **Capping, Metal—**

(See Ridging, Metal.)

### **Cans and Bases, Post—**

W. J. Clark Co., Salem, O.

Van Dorn Iron Works Co., Cleveland, O.

### **Caps and Ventilators—**

W. & J. Tiebout, 118 Chambers St., N. Y.

### **Caps, Bottle and Jar—**

Hero Fruit Jar Co., East Letterly St.,  
Philadelphia, Pa.

### **Caps, Chimney—**

S. Cheney & Son, Manlius, N. Y.

**Caps, Door and Window.**  
**Metal—**

Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.  
Thomas Steel Co., Niles, O.

**Caps, Fruit Jar, Porcelain**  
**Lined—**

Hero Fruit Jar Co., East Letterly St.,  
Philadelphia, Pa.

**Caps, Hip, Pilaster, &c.—**  
(See Architectural Sheet Metal Work.)

**Caps, Hose—**  
(See Hose Attachments.)

**Caps, Percussion—**  
Union Metallic Cartridge Co., Bridge-  
port, Ct.

**Caps, Pole, &c.—**  
R. C. Jenkinson & Co., Newark, N. J.  
Oliver Iron & Steel Co., Pittsburg, Pa.

**Caps, Post, Fence—**  
M. Lanz & Sons, Pittsburg, Pa.  
National Iron & Wire Co., Cleveland, O.  
Van Dorn Iron Works Co., Cleveland, O.

**Car Axles, Bearings, &c.—**  
(See Axles, Bearings, &c.)

**Car Couplings, Pins—**  
(See Pins, Car Coupling.)

**Car Machinery, Steel—**  
E. W. Bliss Co., Brooklyn, N. Y.

**Car Movers—**  
(See Pushers, Car.)

**Car Pushers—**  
(See Pushers, Car.)

**Car Seal Machinery—**  
(See Seals, Machinery for Making Car.)

**Car Shop Tools—**  
Badger State Machine Co., Janesville,  
Wis.

Chambersburg Engineering Co., Chambers-  
burg, Pa.  
Fox Machine Co., Grand Rapids, Mich.  
Hilles & Jones Co., Wilmington, Del.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.

Geo. A. Ohl & Co., Newark, N. J.  
Pratt & Whitney Co., Hartford, Ct.  
Stow Flexible Shaft Co., 26th & Callow-  
hill Sts., Philadelphia, Pa.  
Williams, White & Co., Moline, Ill.

**MERCHANTS.**

Hill, Clarke & Co., Boston, Mass.  
Industrial Supply & Equipment Co., 407  
Sansom St., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.  
Marshall & Huchart Machinery Co., 62  
S. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co.,  
Cleveland, O.  
Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.  
Scully Steel & Iron Co., Halsted and  
Wayman Sts., Chicago, Ill.  
Wickes Bros., Saginaw, Mich.

**Car Shop Wood Working**  
**Machinery—**  
Badger State Machine Co., Janesville,  
Wis.

Fox Machine Co., Grand Rapids, Mich.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Oliver Machinery Co., Grand Rapids,  
Mich.

**Car Starters—**  
(See Pushers, Car.)

**Car Window Locks—**  
(See Locks, Car Window.)

**Carbide of Silicon—**  
(See Silicon, Carbide of.)

**Carbines—**  
(See Rifles, Carbines, &c.)

**Carbolynt, for Sharpening**  
**Files—**

American File Sharpener Co., 296 Broad-  
way, New York.

**Carbon Tongs—**  
(See Tongs, Carbon.)

**Carborundum Cloth—**  
Carborundum Co., Niagara Falls, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

**Carborundum Grains—**  
Carborundum Co., Niagara Falls, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

**Carbureters, Engine—**  
Turner Brass Works, Sycamore, Ill.

**Card Cases, Trays, &c.—**  
(See Cases, Trays, &c.)

**Card Frames, Holders—**  
(See Frames, Holders.)

**Cards, Cotton, Horse, Wool,**  
**&c.—**

John H. Graham & Co., 113 Chambers  
St., New York.

**Cards, File Cleaning—**  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Nicholson File Co., Providence, R. I.

**Carpenter Shop Machinery—**  
Fox Machine Co., Grand Rapids, Mich.  
Oliver Machinery Co., Grand Rapids,  
Mich.

**Carpenters' Clamps, Slicks—**  
(See Clamps, Slicks.)

**Carpenters' Pincers—**  
(See Pincers.)

**Carpet Shears—**  
(See Shears, Upholsterers' and Carpet.)

**Carpet Tacks—**  
(See Tacks, Brads, Finishing Nails, &c.)

**Carriage and Wagon Hard-**  
**ware—**

C. O. Bradley & Son, Inc., Syracuse,  
N. Y.

E. D. Clapp Mfg. Co., Auburn, N. Y.  
Richard Eccles Co., Auburn, N. Y.  
Kilborn & Bishop Co., New Haven, Ct.  
Scranton Forging Co., Scranton, Pa.  
M. Seward & Son Co., New Haven, Ct.  
Stieby & Foot Co., Newark, N. J.  
Walter W. Woodruff & Sons Co., Mt. Car-  
mel, Ct.

**Carriage Axles, Bolts, &c.—**  
(See Axles, Bolts, &c.)

**Carriage Hardware—**  
(See Carriage Reaches and Hardware.)

**Carriage Reaches and**  
**Hardware—**

Boston Pressed Metal Co., Worcester,  
Mass.  
Worcester Pressed Steel Co., Worcester,  
Mass.

**Carriages, Gun—**  
Alliance Machine Co., Alliance, O.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Mesta Machine Co., Pittsburgh, Pa.  
Morgan Engineering Co., Alliance, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.



**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**  
**Youngstown Car Mfg. Co., Youngstown, O.**

**MERCHANTS.**  
**J. Obermayer Co., Cincinnati, O.**

**Cars, Creosoting—**  
**Arthur Koppel Co., Pittsburgh, Pa.**

**Cars, Drying—**  
**Atlas Car & Mfg. Co., Cleveland, O.**  
**Byram & Co., Detroit, Mich.**  
**Chase Foundry & Mfg. Co., Columbus, O.**  
**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**

**Cars, Dump—**  
**Atlas Car & Mfg. Co., Cleveland, O.**  
**Byram & Co., Detroit, Mich.**  
**Thos. Carlin's Sons Co., N. S. Pitts-**  
**burgh, Pa.**

**Chase Foundry & Mfg. Co., Columbus, O.**  
**C. W. Hunt Co., West New Brighton, N. Y.**  
**Jeffrey Mfg. Co., Columbus, O.**  
**W. A. Jones Foundry & Machine Co.,**  
**142-164 W. North Ave., Chicago, Ill.**

**Kilbourne & Jacobs Mfg. Co., Columbus, O.**  
**Arthur Koppel Co., Pittsburgh, Pa.**  
**Link-Belt Co., Philadelphia, Pa.**  
**Sheffield Car Co., Three Rivers, Mich.**  
**Sullivan Machinery Co., Railway Ex-**  
**change Bldg., Chicago, Ill.**

**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**  
**Youngstown Car Mfg. Co., Youngstown, O.**

**MERCHANTS.**  
**Thos. P. Conard & Co., Harrison Bldg.,**  
**Philadelphia, Pa.**  
**Cal. Hirsch & Sons Iron & Rail Co.,**  
**St. Louis, Mo.**

**Manning, Maxwell & Moore, Inc., 85 Lib-**  
**erty St., New York.**  
**Southern Iron & Equipment Co., Atlanta,**  
**Ga.**

**Wonham & Magor, 29 Broadway, N. Y.**  
**Cars, Electric—**

**Atlas Car & Mfg. Co., Cleveland, O.**  
**Chase Foundry & Mfg. Co., Columbus, O.**  
**Westinghouse Electric & Mfg. Co., Pitts-**  
**burgh, Pa.**

**Westinghouse Machine Co., East Pitts-**  
**burgh, Pa.**

**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**

**Youngstown Car Mfg. Co., Youngstown, O.**

**Cars, Elevator—**  
**Buffalo Wire Works Co., Buffalo, N. Y.**  
**Dufur & Co., Baltimore, Md.**

**Glen Mfg. Co., Ellwood City, Pa.**  
**Ludlow-Saylor Wire Co., St. Louis, Mo.**  
**W. S. Tyler Co., Cleveland, O.**

**Wright Wire Co., Worcester, Mass.**

**Cars, Foundry—**  
**Atlas Car & Mfg. Co., Cleveland, O.**  
**Byram & Co., Detroit, Mich.**

**Chase Foundry & Mfg. Co., Columbus, O.**  
**C. W. Hunt Co., West New Brighton,**  
**N. Y.**

**Arthur Koppel Co., Pittsburgh, Pa.**  
**Osborn Mfg. Co., Cleveland, O.**

**Sheffield Car Co., Three Rivers, Mich.**  
**Whiting Foundry Equipment Co., Har-**  
**vey, Ill.**

**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**

**Cars, Freight—**  
**Arthur Koppel Co., Pittsburgh, Pa.**

**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**

**MERCHANTS.**  
**Barclay M. Everson, Pittsburgh, Pa.**  
**Southern Iron & Equipment Co., Atlanta,**  
**Ga.**

**Cars, Garbage—**  
**Atlas Car & Mfg. Co., Cleveland, O.**

**Cars, Gasoline, Interurban—**  
**Sheffield Car Co., Three Rivers, Mich.**

**Cars, Gasoline Motor—**  
**Abendroth & Root Mfg. Co., Newburgh,**  
**N. Y.**

**Chase Foundry & Mfg. Co., Columbus, O.**  
**Sheffield Car Co., Three Rivers, Mich.**

**Cars, Hotel and Kitchen—**  
**Chase Foundry & Mfg. Co., Columbus, O.**

**Cars, Industrial and Narrow**  
**Gauge Railway—**

**Atlas Car & Mfg. Co., Cleveland, O.**  
**Byram & Co., Detroit, Mich.**

**Chase Foundry & Mfg. Co., Columbus, O.**  
**C. W. Hunt Co., West New Brighton,**  
**N. Y.**

**Arthur Koppel Co., Pittsburgh, Pa.**  
**Link-Belt Co., Philadelphia, Pa.**

**A. L. Schultz & Son, 570-572 Elston Ave.,**  
**Chicago, Ill.**

**Shannon Engineering & Contracting Co.,**  
**Pittsburgh, Pa.**

**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**

**Youngstown Car Mfg. Co., Youngstown, O.**

**Cars, Ingot Mold—**  
**Atlas Car & Mfg. Co., Cleveland, O.**

**Chase Foundry & Mfg. Co., Columbus, O.**  
**Mesta Machine Co., Pittsburgh, Pa.**

**Pennsylvania Engineering Works, New**  
**Castle, Pa.**

**Cars, Iron and Steel Hand-**  
**dling—**

**Youngstown Car Mfg. Co., Youngstown, O.**

**Cars, Kitchen—**  
**(See Cars, Hotel and Kitchen.)**

**Cars, Logging—**  
**Atlas Car & Mfg. Co., Cleveland, O.**

**Chase Foundry & Mfg. Co., Columbus, O.**  
**Arthur Koppel Co., Pittsburgh, Pa.**

**Sheffield Car Co., Three Rivers, Mich.**  
**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**

**Cars, Motor Railway—**  
**Sheffield Car Co., Three Rivers, Mich.**

**Cars, Odometer—**  
**Sheffield Car Co., Three Rivers, Mich.**

**Cars, Open Hearth Charg-**  
**ing—**

**Chase Foundry & Mfg. Co., Columbus, O.**  
**Taylor-Wilson Mfg. Co., McKees Rocks,**  
**Pa.**

**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**

**Cars, Ore—**  
**Byram & Co., Detroit, Mich.**

**Chase Foundry & Mfg. Co., Columbus, O.**  
**Ernst Wiener Co., Church and Fulton**  
**Sts., New York.**

**Youngstown Car Mfg. Co., Youngstown, O.**

**Cars, Package—**  
**(See Bicycles, Motor.)**

**Cars, Plantation—**  
**Atlas Car & Mfg. Co., Cleveland, O.**

- Carriages, Trolley—**  
McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.
- Yale & Towne Mfg. Co., 9 Murray St., New York.**
- Carriers, Barb Wire—**  
Arcade Mfg. Co., Freeport, Ill.
- Carriers, Cash and Package—**  
Globe Machine & Stamping Co., Cleveland, O.
- Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.**
- Carriers, Endless Apron—**  
H. W. Caldwell & Son Co., Western Ave., and 17th St., Chicago, Ill.
- Link-Belt Co., Philadelphia, Pa.**
- Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.**
- Carriers, Feed and Ensilage—**  
Louden Machinery Co., Fairfield, Ia.
- Carriers, Hand Holst—**  
F. E. Myers & Bros., Ashland, O.
- Niles-Bement-Pond Co., 111 Broadway, New York.**
- Ney Mfg. Co., Canton, O.**
- Yale & Towne Mfg. Co., 9 Murray St., New York.**
- Carriers, Hay Fork—**  
(See Haying Tools.)
- Carriers, Litter—**  
Louden Machinery Co., Fairfield, Ia.
- Carriers, Merchandise—**  
Louden Machinery Co., Fairfield, Ia.
- Carriers, Milk Bots—**  
Estey Wire Wks. Co., 59 Fulton St., N. Y.
- Fred J. Meyers Mfg. Co., Hamilton, O.**
- Parker Wire Goods Co., Worcester, Mass.**
- Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.**
- Wire Goods Co., Worcester, Mass.**
- Carriers, Milk Can—**  
Louden Machinery Co., Fairfield, Ia.
- Carriers, Oil—**  
Gem Mfg. Co., Pittsburgh, Pa.
- Carriers, Stove—**  
Kilbourne & Jacobs Mfg. Co., Columbus, O.
- Carriers, Trunk—**  
Kilbourne & Jacobs Mfg. Co., Columbus, O.
- Ney Mfg. Co., Canton, O.**
- Carriers, Tumbler, Silver Plated—**  
International Silver Co., Meriden, Ct.
- Carrying Track, Overhead—**  
(See Track, Overhead Carrying.)
- Cars, Ash—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Cars, Billet—**  
Youngstown Car Mfg. Co., Youngstown, O.
- Cars, Boiler—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Cars, Brick—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Chase Foundry & Mfg. Co., Columbus, O.**
- W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.**
- Kilbourne & Jacobs Mfg. Co., Columbus, O.**
- Arthur Koppel Co., Pittsburgh, Pa.**
- Sheffield Car Co., Three Rivers, Mich.**
- Ernst Wiener Co., Church and Fulton Sts., New York.**
- Youngstown Car Mfg. Co., Youngstown, O.**
- Cars, Calceine—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Cars, Cane—**  
Kilbourne & Jacobs Mfg. Co., Columbus, O.
- Ernst Wiener Co., Church and Fulton Sts., New York.**
- Cars, Cement Block—**  
Chase Foundry & Mfg. Co., Columbus, O.
- Arthur Koppel Co., Pittsburgh, Pa.**
- Ernst Wiener Co., Church and Fulton Sts., New York.**
- Cars, Charging—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Cars, Clay—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Cars, Coal—**  
Chase Foundry & Mfg. Co., Columbus, O.
- Arthur Koppel Co., Pittsburgh, Pa.**
- Ernst Wiener Co., Church and Fulton Sts., New York.**
- Cars, Coal Charging—**  
Chase Foundry & Mfg. Co., Columbus, O.
- Cars, Coal, Hotel, Kitchen—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Arthur Koppel Co., Pittsburgh, Pa.**
- Ernst Wiener Co., Church and Fulton Sts., New York.**
- Cars, Coal Mine, Pit, &c.—**  
Atlas Car & Mfg. Co., Cleveland, O.
- F. H. Evans, Brooklyn, N. Y.**
- W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.**
- Kilbourne & Jacobs Mfg. Co., Columbus, O.**
- Arthur Koppel Co., Pittsburgh, Pa.**
- Link-Belt Co., Philadelphia, Pa.**
- New Castle Forge & Bolt Co., New Castle, Pa.**
- Sheffield Car Co., Three Rivers, Mich.**
- Wellman-Seaver-Morgan Co., Cleveland, O.**
- Ernst Wiener Co., Church and Fulton Sts., New York.**
- Youngstown Car Mfg. Co., Youngstown, O.**
- MERCHANTS.**
- Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.**
- Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.**
- Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.**
- Southern Iron & Equipment Co., Atlanta, Ga.**
- Wonham & Magor, 29 Broadway, N. Y.**
- Cars, Coke—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Byram & Co., Detroit, Mich.**
- Chase Foundry & Mfg. Co., Columbus, O.**
- Arthur Koppel Co., Pittsburgh, Pa.**
- Ernst Wiener Co., Church and Fulton Sts., New York.**
- Cars, Concentrate—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Cars, Core Oven—**  
Atlas Car & Mfg. Co., Cleveland, O.
- Byram & Co., Detroit, Mich.**
- Chase Foundry & Mfg. Co., Columbus, O.**
- C. W. Hunt Co., West New Brighton, N. Y.**
- Kilbourne & Jacobs Mfg. Co., Columbus, O.**
- Arthur Koppel Co., Pittsburgh, Pa.**
- Osborn Mfg. Co., Cleveland, O.**
- Whiting Foundry Equipment Co., Harvey, Ill.**

**Ernst Wiener Co., Church and Fulton**  
Sta., New York  
**Youngstown Car Mfg. Co., Youngstown, O.**

**MERCHANTS.**

**J. Obermayer Co., Cincinnati, O.**

**Cars, Creosoting—**

**Arthur Koppel Co., Pittsburgh, Pa.**

**Cars, Drying—**

**Atlas Car & Mfg. Co., Cleveland, O.**

**Byram & Co., Detroit, Mich.**

**Chase Foundry & Mfg. Co., Columbus, O.**

**Ernst Wiener Co., Church and Fulton**

**Sta., New York.**

**Cars, Dump—**

**Atlas Car & Mfg. Co., Cleveland, O.**

**Byram & Co., Detroit, Mich.**

**Thos. Carlin's Sons Co., N. S. Pitts-**

**burgh, Pa.**

**Chase Foundry & Mfg. Co., Columbus, O.**

**C. W. Hunt Co., West New Brighton, N. Y.**

**Jeffrey Mfg. Co., Columbus, O.**

**W. A. Jones Foundry & Machine Co.,**

**142-164 W. North Ave., Chicago, Ill.**

**Kilbourne & Jacobs Mfg. Co., Columbus, O.**

**Arthur Koppel Co., Pittsburgh, Pa.**

**Link-Belt Co., Philadelphia, Pa.**

**Sheffield Car Co., Three Rivers, Mich.**

**Sullivan Machinery Co., Railway Ex-**

**change Bldg., Chicago, Ill.**

**Ernst Wiener Co., Church and Fulton**

**Sta., New York.**

**Youngstown Car Mfg. Co., Youngstown, O.**

**MERCHANTS.**

**Thos. P. Conard & Co., Harrison Bldg.,**

**Philadelphia, Pa.**

**Cal. Hirsch & Sons Iron & Rail Co.,**

**St. Louis, Mo.**

**Manning, Maxwell & Moore, Inc., 85 Lib-**

**erty St., New York.**

**Southern Iron & Equipment Co., Atlanta,**

**Ga.**

**Wonham & Magor, 29 Broadway, N. Y.**

**Cars, Electric—**

**Atlas Car & Mfg. Co., Cleveland, O.**

**Chase Foundry & Mfg. Co., Columbus, O.**

**Westinghouse Electric & Mfg. Co., Pitts-**

**burgh, Pa.**

**Westinghouse Machine Co., East Pitts-**

**burgh, Pa.**

**Ernst Wiener Co., Church and Fulton**

**Sta., New York.**

**Youngstown Car Mfg. Co., Youngstown, O.**

**Cars, Elevator—**

**Buffalo Wire Works Co., Buffalo, N. Y.**

**Dufur & Co., Baltimore, Md.**

**Glen Mfg. Co., Ellwood City, Pa.**

**Landow-Saylor Wire Co., St. Louis, Mo.**

**W. S. Tyler Co., Cleveland, O.**

**Wright Wire Co., Worcester, Mass.**

**Cars, Foundry—**

**Atlas Car & Mfg. Co., Cleveland, O.**

**Byram & Co., Detroit, Mich.**

**Chase Foundry & Mfg. Co., Columbus, O.**

**C. W. Hunt Co., West New Brighton,**

**N. Y.**

**Arthur Koppel Co., Pittsburgh, Pa.**

**Osborn Mfg. Co., Cleveland, O.**

**Sheffield Car Co., Three Rivers, Mich.**

**Whiting Foundry Equipment Co., Har-**

**vey, Ill.**

**Ernst Wiener Co., Church and Fulton**

**Sta., New York.**

**Cars, Freight—**

**Arthur Koppel Co., Pittsburgh, Pa.**

**Ernst Wiener Co., Church and Fulton**  
Sta., New York.

**MERCHANTS.**

**Barclay M. Everson, Pittsburgh, Pa.**

**Southern Iron & Equipment Co., Atlanta,**

**Ga.**

**Cars, Garbage—**

**Atlas Car & Mfg. Co., Cleveland, O.**

**Cars, Gasoline, Interurban—**

**Sheffield Car Co., Three Rivers, Mich.**

**Cars, Gasoline Motor—**

**Abendroth & Root Mfg. Co., Newburgh,**

**N. Y.**

**Chase Foundry & Mfg. Co., Columbus, O.**

**Sheffield Car Co., Three Rivers, Mich.**

**Cars, Hotel and Kitchen—**

**Chase Foundry & Mfg. Co., Columbus, O.**

**Cars, Industrial and Narrow**

**Gauge Railway—**

**Atlas Car & Mfg. Co., Cleveland, O.**

**Byram & Co., Detroit, Mich.**

**Chase Foundry & Mfg. Co., Columbus, O.**

**C. W. Hunt Co., West New Brighton,**

**N. Y.**

**Arthur Koppel Co., Pittsburgh, Pa.**

**Link-Belt Co., Philadelphia, Pa.**

**A. L. Schultz & Son, 570-572 Elston Ave.,**

**Chicago, Ill.**

**Shannon Engineering & Contracting Co.,**

**Pittsburgh, Pa.**

**Ernst Wiener Co., Church and Fulton**

**Sta., New York.**

**Youngstown Car Mfg. Co., Youngstown, O.**

**Cars, Ingot Mold—**

**Atlas Car & Mfg. Co., Cleveland, O.**

**Chase Foundry & Mfg. Co., Columbus, O.**

**Mesta Machine Co., Pittsburgh, Pa.**

**Pennsylvania Engineering Works, New**

**Castle, Pa.**

**Cars, Iron and Steel Hand-**

**dling—**

**Youngstown Car Mfg. Co., Youngstown, O.**

**Cars, Kitchen—**

**(See Cars, Hotel and Kitchen.)**

**Cars, Logging—**

**Atlas Car & Mfg. Co., Cleveland, O.**

**Chase Foundry & Mfg. Co., Columbus, O.**

**Arthur Koppel Co., Pittsburgh, Pa.**

**Sheffield Car Co., Three Rivers, Mich.**

**Ernst Wiener Co., Church and Fulton**

**Sta., New York.**

**Cars, Motor Railway—**

**Sheffield Car Co., Three Rivers, Mich.**

**Cars, Odometer—**

**Sheffield Car Co., Three Rivers, Mich.**

**Cars, Open Hearth Charg-**

**ing—**

**Chase Foundry & Mfg. Co., Columbus, O.**

**Taylor-Wilson Mfg. Co., McKees Rocks,**

**Pa.**

**Ernst Wiener Co., Church and Fulton**

**Sta., New York.**

**Cars, Ore—**

**Byram & Co., Detroit, Mich.**

**Chase Foundry & Mfg. Co., Columbus, O.**

**Ernst Wiener Co., Church and Fulton**

**Sta., New York.**

**Youngstown Car Mfg. Co., Youngstown, O.**

**Cars, Package—**

**(See Bicycles, Motor.)**

**Cars, Plantation—**

**Atlas Car & Mfg. Co., Cleveland, O.**

Chase Foundry & Mfg. Co., Columbus, O.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Cars, Platform—**

Atlas Car & Mfg. Co., Cleveland, O.  
 Byram & Co., Detroit, Mich.  
 Chase Foundry & Mfg. Co., Columbus, O.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.  
 Youngstown Car Mfg. Co., Youngstown, O.

#### **Cars, Pulp—**

Chase Foundry & Mfg. Co., Columbus, O.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Cars, Push—**

Chase Foundry & Mfg. Co., Columbus, O.  
 C. W. Hunt Co., West New Brighton, N.Y.  
 Sheffield Car Co., Three Rivers, Mich.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Cars, Railroad—**

Atlas Car & Mfg. Co., Cleveland, O.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **MERCHANTS.**

Thomas P. Conard & Co., 119 S. 4th St.,  
 Philadelphia, Pa.  
 Dallett & Co., Harrison Bldg., Philadel-  
 phia, Pa.  
 Cal. Hirsch & Sons Iron & Rail Co.,  
 St. Louis, Mo.  
 Ernest Law & Co., 15th & Market Sts.,  
 Philadelphia, Pa.  
 Pierson & Co., 29 Broadway, N. Y.  
 Southern Iron & Equipment Co., Atlanta,  
 Ga.  
 Wonham & Magor, 29 Broadway, N. Y.

#### **Cars, Railroad Hand—**

Kilbourne & Jacobs Mfg. Co., Columbus, O.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Cars, Rolling Mill—**

Atlas Car & Mfg. Co., Cleveland, O.  
 Chase Foundry & Mfg. Co., Columbus, O.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Pennsylvania Engineering Works, New  
 Castle, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Whiting Foundry Equipment Co., Har-  
 vey, Ill.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.  
 Youngstown Car Mfg. Co., Youngstown, O.

#### **Cars, Skip—**

Atlas Car & Mfg. Co., Cleveland, O.  
 Brown Hoisting Machinery Co., Cleveland,  
 Chase Foundry & Mfg. Co., Columbus, O.  
 W. A. Jones Foundry & Machine Co.,  
 142-164 W. North Ave., Chicago, Ill.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Link-Belt Co., Philadelphia, Pa.  
 Pennsylvania Engineering Works, New  
 Castle, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Wellman-Seaver-Morgan Co., Cleveland, O.

Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Cars, Steel—**

Atlas Car & Mfg. Co., Cleveland, O.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Wellman-Seaver-Morgan Co., Cleveland,  
 Ohio.  
 Whiting Foundry Equipment Co., Har-  
 vey, Ill.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.  
 Youngstown Car Mfg. Co., Youngstown, O.

#### **MERCHANTS.**

Cal. Hirsch & Sons Iron & Rail Co.,  
 St. Louis, Mo.  
 Manning, Maxwell & Moore, Inc., 85 Lib-  
 erty St., New York.  
 Wonham & Magor, 29 Broadway, N. Y.

#### **Cars, Steel Mine—**

W. A. Jones Foundry & Machine Co.,  
 112-164 W. North Ave., Chicago, Ill.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.  
 Youngstown Car Mfg. Co., Youngstown, O.

#### **Cars, Stone—**

Chase Foundry & Mfg. Co., Columbus, O.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Cars, Sugar Cane—**

Atlas Car & Mfg. Co., Cleveland, O.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Cars, Tank—**

Atlas Car & Mfg. Co., Cleveland, O.  
 Riter-Couley Mfg. Co., Pittsburgh, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Tudor Boiler Mfg. Co., Cincinnati, O.

#### **Cars, Track Laying—**

Sheffield Car Co., Three Rivers, Mich.

#### **Cars, Transfer—**

Byram & Co., Detroit, Mich.  
 Chase Foundry & Mfg. Co., Columbus, O.  
 Arthur Koppel Co., Pittsburgh, Pa.  
 Whiting Foundry Equipment Co., Har-  
 vey, Ill.

Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Cars, Velocipede—**

Arthur Koppel Co., Pittsburgh, Pa.  
 Sheffield Car Co., Three Rivers, Mich.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Cars, Wagon Transfer—**

Sheffield Car Co., Three Rivers, Mich.

#### **Cars, Water and Acid Bosh—**

Atlas Car & Mfg. Co., Cleveland, O.

#### **Cars, Weed Cutting, Rail- road—**

Sheffield Car Co., Three Rivers, Mich.

#### **Cars, Wire—**

Chase Foundry & Mfg. Co., Columbus, O.

#### **Cartridge Machines—**

Blake & Johnson Co., Waterbury, Ct.  
 Ferracute Machine Co., Bridgeton, N. J.  
 F. J. Manville Mach. Co., Waterbury, Ct.  
 Waterbury Farrel Foundry & Machine  
 Co., Waterbury, Ct.

Zea & Hahnemann Co., Newark, N. J.

**Cartridges—**

Union Metallic Cartridge Co., Bridgeport, Ct.

**Carts, Barrel—**

Bateman Mfg. Co., Grenloch, N. J.

**Carts, Crushed Ice—**

Sheffield Car Co., Three Rivers, Mich.

**Carts, Dump—**

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Carts, Lumber—**

Kilbourne & Jacobs Mfg. Co., Columbus, O.

**Carts, Push—**

Bateman Mfg. Co., Grenloch, N. J.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

Arthur Koppel Co., Pittsburgh, Pa.

Syracuse Chilled Plow Co., Syracuse, N. Y.

**Carts, Steel—**

Atlas Car & Mfg. Co., Cleveland, O.

F. H. Evans, Brooklyn, N. Y.

**Carvers, Assistants, Forks, Holders, &c—**

Landers, Frary & Clark, New Britain, Ct.

**Carving Tools—**

Buck Bros., Millbury, Mass.

Millers Falls Co., 28 Warren St., N. Y.

**Casement Adjusters, Fasteners—**

(See Adjusters, Fasteners.)

**Cases, Bill Head and Envelope—**

Merriam Mfg. Co., Durham, Ct.

**Cases, Card, Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Cases, Catalogue—**

J. D. Warren Mfg. Co., Chicago, Ill.

**Cases, Cutlery—**

J. D. Warren Mfg. Co., Chicago, Ill.

**Cases, Display—**

J. D. Warren Mfg. Co., Chicago, Ill.

**Cases, Document and File, Steel—**

General Fire Proofing Co., Youngstown, O.

Van Dorn Iron Works Co., Cleveland, O.

**Cases, Drill—**

Cleveland Twist Drill Co., Cleveland, O.

Standard Tool Co., Cleveland, O.

Whitman & Barnes Mfg. Co., Chicago, Ill.

**Cases, Induction Coil, to Order—**

Union Hardware Co., Torrington, Ct.

**Cases, Jack, Seamless Welded—**

American Welding Co., Carbondale, Pa.

**Cases, Match, Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Cases, Packing—**

(See Boxes and Cases, Packing.)

**Cases, Railroad Ticket—**

American Railway Supply Co., 24 Park Place, New York.

**Cases, Screw and Bolt—**

W. C. Heller & Co., Montpelier, O.

J. D. Warren Mfg. Co., Chicago, Ill.

**Cases, Seed—**

W. C. Heller & Co., Montpelier, O.

**Cases, Shipping, All Steel—**  
Terrell's Equipment Co., Grand Rapids, Mich.

**Cases, Shipping, Wood Bound with Steel—**

Terrell's Equipment Co., Grand Rapids, Mich.

**Cash Recorders, Auto-graph—**

(See Recorders, Cash, Autograph.)

**Cashiers, Coin, Combination—**

Ireland & Matthews Mfg. Co., Detroit, Mich.

**Casing, Oil Well—**

La Belle Iron Works, Steubenville, O.

National Tube Co., Pittsburgh, Pa.

Youngstown Sheet & Tube Co., Youngstown, O.

**Casings, Elevator Steel—**

W. J. Clark Co., Salem, O.

**Caskets, Jewel, Silver and Silver Plated—**

(See Jewel Caskets.)

**Casks, Shipping—**

W. J. Clark Co., Salem, O.

**Cast Iron Columns—**

(See Iron Work, Builders, &c.)

**Cast Iron Enamels—**

(See Enamels.)

**Cast Washers—**

(See Washers, Cast.)

**Casters, Ball and Roller Bearing—**

George P. Clark Co., Windsor Locks, Ct.

Excelsior Tool & Machine Co., E. St. Louis, Ill.

Otto Konigslow Mfg. Co., Cleveland, O.

Schatz Mfg. Co., Chappaqua, N. Y.

M. B. Schenck Co., Meriden, Ct.

Universal Caster & Foundry Co., 1170 Broadway, New York.

**Casters, Bed, Plate, &c—**

Geo. P. Clark Co., Windsor Locks, Ct.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Schatz Mfg. Co., Chappaqua, N. Y.

M. B. Schenck Co., Meriden, Ct.

Universal Caster & Foundry Co., 1170 Broadway, New York.

Wrightsville Hardware Co., Wrightsville, Pa.

**Casters, Dinner, Pickle, Salad, &c., Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Casters, Furniture—**

M. B. Schenck Co., Meriden, Ct.

Universal Caster & Foundry Co., 1170 Broadway, New York.

**Casters, Metal Bed—**

M. B. Schenck Co., Meriden, Ct.

Universal Caster & Foundry Co., 1170 Broadway, New York.

**Casters, Piano—**

(See Casters, Bed, Plate, &c.)

**Casters, Rubber Wheel—**

Geo. P. Clark Co., Windsor Locks, Ct.

Elast. Tip Co., Boston, Mass.

M. B. Schenck Co., Meriden, Ct.

**Casters, Stove Leg—**

M. B. Schenck Co., Meriden, Ct.



**Casters, Truck—**

Geo. P. Clark Co., Windsor Locks, Ct.  
 Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.  
 Reading Hardware Co., Reading, Pa.  
 M. B. Schenck Co., Meriden, Ct.  
 Universal Caster & Foundry Co., 1170  
 Broadway, New York.

**Castings Dip, Asphalt—**  
 National Roofing Co., Tonawanda, N. Y.

**Castings, Machines. Blast Furnace—**

Arthur G. McKee, Cleveland, O.  
**Castings, Agricultural—**  
 Columbus Malleable Casting Co., Colum-  
 bus, O.

**Castings, Air Furnace—**  
 Birdsboro Steel Foundry & Machine Co.,  
 Birdsboro, Pa.

Buffalo Foundry & Machine Co., Buffalo,  
 N. Y.

Chester Steel Castings Co., 407 Sansom  
 St., Philadelphia, Pa.

Mesta Machine Co., Pittsburgh, Pa.  
 Philadelphia Roll & Machine Co., 23d St.  
 & Washington Ave., Philadelphia, Pa.

**Castings, Aluminum—**  
 Aluminum Co. of America, Pittsburgh,  
 Pa.

Bancroft & Co., Philadelphia, Pa.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Bridgeport Deoxidized Bronze & Metal  
 Co., Bridgeport, Ct.

J. B. Chapman & Co., Springfield,  
 Mass.

Chicago Hardware Foundry Co., North  
 Chicago, Ill.

Clum & Atkinson, Rochester, N. Y.  
 Eynon-Evans Mfg. Co., 1517 Clearfield St.,  
 Philadelphia, Pa.

Haven Malleable Castings Co., Cincin-  
 nati, O.

Humphrey & Sons, Joliet, Ill.  
 Lunkenheimer Co., Cincinnati, O.

Ohio Brass Co., Mansfield, O.  
 Paul S. Reeves & Son, Philadelphia, Pa.

Riverside Metal Co., Riverside, N. J.  
 Sheffield Car Co., Three Rivers, Mich.

Turner Brass Works, Sycamore, Ill.  
 Whitlock Coil Pipe Co., Hartford, Ct.

York Pattern Works, York, Pa.

**Castings, Architectural—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
 Browning Engineering Co., Cleveland, O.  
 Chattanooga Roofing & Foundry Co.,  
 Chattanooga, Tenn.

Chester Steel Castings Co., 407 Sansom  
 St., Philadelphia, Pa.

Chicago Hardware Foundry Co., North  
 Chicago, Ill.

A. W. Findlay Co., Inc., 23d and Market  
 Sts., Philadelphia, Pa.

St. Louis Car Wheel Co., St. Louis, Mo.  
 West Side Foundry Co., Troy, N. Y.

**Castings, Automobile—**

Acme Steel & Malleable Iron Works,  
 Buffalo, N. Y.

Buffalo Crucible Casting Co., Buffalo,  
 N. Y.

Chicago Steel Foundry Co., The Rookery,  
 Chicago, Ill.

Crucible Steel Casting Co., Lansdowne,  
 Pa.

Empire Foundry Co., New Brunswick,  
 N. J.

Lebanon Steel Casting Co., Lebanon, Pa.  
 Homer F. Livermore, Boston, Mass.

Morse Iron Works, Erie, Pa.  
 Ohio Brass Co., Mansfield, O.

Phosphor-Bronze Smelting Co., 2200  
 Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.  
 Tropenas Steel Co., New Castle, Del.

Susquehanna Casting Co., Wrightsville,  
 Pa.

**Castings, Automobile. Gray Iron—**

Empire Foundry Co., New Brunswick,  
 N. J.

Richmond Foundry & Mfg. Co., Inc.,  
 Richmond, Va.

**Castings, Bell Metal—**

Ohio Brass Co., Mansfield, O.

**Castings, Bench Leg—**

Bethlehem Foundry & Machine Co.,  
 South Bethlehem, Pa.

Brown & Sharpe Mfg. Co., Providence,  
 R. I.

Chester Steel Castings Co., 407 Sansom  
 St., Philadelphia, Pa.

Morse Iron Works, Erie, Pa.  
 New Britain Machine Co., New Britain,  
 Ct.

West Side Foundry Co., Troy, N. Y.

**Castings, Bicycle—**

Chester Steel Castings Co., 407 Sansom  
 St., Philadelphia, Pa.

**Castings, Blocking Die—**

Crucible Steel Casting Co., Lansdowne,  
 Pa.

**Castings, Boiler. Steam—**

Federal Steel Foundry Co., Chester, Pa.

**Castings, Brass—**

American Gas Machine Co., Albert Lea,  
 Minn.

American Tool & Machine Co., Boston.  
 Bancroft & Co., Philadelphia, Pa.

Barnes Mfg. Co., Mansfield, O.  
 Bethlehem Steel Co., So. Bethlehem, Pa.

Bridgeport Deoxidized Bronze & Metal  
 Co., Bridgeport, Ct.

J. B. Chapman & Co., Springfield,  
 Mass.

Chicago Hardware Foundry Co., North  
 Chicago, Ill.

Clark Novelty Co., Rochester, N. Y.  
 Clum & Atkinson, Rochester, N. Y.

Eynon-Evans Mfg. Co., 1517 Clearfield St.,  
 Philadelphia, Pa.

Fawcuss Machine Co., Pittsburgh, Pa.  
 A. W. Findlay Co., Inc., 23d and Market  
 Sts., Philadelphia, Pa.

Haven Malleable Castings Co., Cincin-  
 nati, O.

Hubley Mfg. Co., Lancaster, Pa.  
 Humphrey & Sons, Joliet, Ill.

Humphreys Mfg. Co., Mansfield, O.  
 H. B. Ives Co., New Haven, Ct.

Keystone Furnace Construction Co., Inc.,  
 Pittsburgh, Pa.

Thomas Laughlin Co., Portland, Me.  
 Homer F. Livermore, Boston, Mass.

Lunkenheimer Co., Cincinnati, O.  
 Lynchburg Foundry Co., Lynchburg, Va.

McClave-Brooks Co., Scranton, Pa.  
 Mackintosh, Hemphill & Co., Pittsburgh,  
 Pa.

Mesta Machine Co., Pittsburgh, Pa.  
 Franklin Moore Co., Winsted, Ct.  
 Morgan Engineering Co., Alliance, O.  
 National Brake & Electric Co., Milwaukee, Wis.  
 Nolte Brass Co., Springfield, O.  
 North Bros. Mfg. Co., Philadelphia, Pa.  
 Ohio Brass Co., Mansfield, O.  
 Henry Perkins Co., Bridgewater, Mass.  
 Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
 Poole Engineering & Machine Co., Baltimore, Md.  
 Paul S. Reeves & Son, Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.  
 Sheffield Car Co., Three Rivers, Mich.  
 I. S. Spencer's Sons, Guilford, Ct.  
 Turner Brass Works, Sycamore, Ill.  
 United Engineering & Foundry Co., Pittsburgh, Pa.  
 Whitlock Coil Pipe Co., Hartford, Ct.  
 Wilcox, Crittenden & Co., Inc., Middletown, Ct.  
 Walter W. Woodruff & Sons Co., Mount Carmel, Ct.  
 York Pattern Works, York, Pa.

**Castings, Bronze—**  
 Bancroft & Co., Philadelphia, Pa.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Bridgeport Deoxidized Bronze & Metal Co., Bridgeport, Ct.  
 J. B. Chapman & Co., Springfield, Mass.  
 Chicago Hardware Foundry Co., North Chicago, Ill.  
 Clum & Atkinson, Rochester, N. Y.  
 Eynon-Evans Mfg. Co., 1507 Clearfield St., Philadelphia, Pa.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 Haven Malleable Castings Co., Cincinnati, O.  
 Hubley Mfg. Co., Lancaster, Pa.  
 Humphrey & Sons, Joliet, Ill.  
 H. B. Ives Co., New Haven, Ct.  
 Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.  
 Homer F. Livermore, Boston, Mass.  
 Lunkenhimer Company, Cincinnati, O.  
 Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Mesta Machine Co., Pittsburgh, Pa.  
 Morgan Engineering Co., Alliance, O.  
 Nolte Brass Co., Springfield, O.  
 Ohio Brass Co., Mansfield, O.  
 Phosphor Bronze Smelting Co., 2300 Washington Ave., Philadelphia, Pa.  
 Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
 Paul S. Reeves & Son, Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.  
 I. S. Spencer's Sons, Guilford, Ct.  
 Turner Brass Works, Sycamore, Ill.  
 United Engineering & Foundry Co., Pittsburgh, Pa.  
 Whitlock Coil Pipe Co., Hartford, Ct.  
 York Pattern Works, York, Pa.

**Castings, Cement Mill—**  
 Buffalo Foundry & Machine Co., Buffalo, N. Y.

**Castings, Charcoal Gun Iron—**  
 Mesta Machine Co., Pittsburgh, Pa.  
 Poole Engineering & Machine Co., Baltimore, Md.

**Castings, Chemical Works—**  
 Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.  
 Federal Steel Foundry Co., Chester, Pa.  
 Lunkenhimer Co., Cincinnati, O.  
 Ohio Brass Co., Mansfield, O.  
 Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia, Pa.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Castings, Chrome Steel—**  
 Buffalo Crucible Casting Co., Buffalo, N. Y.  
 Chrome Steel Works, Chrome, N. J.  
 Crucible Steel Casting Co., Lansdowne, Pa.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Thomas Prosser & Son, 26 Platt St., N. Y.  
 Taylor Iron & Steel Co., High Bridge, N. J.

**Castings, Composition—**  
 J. B. Chapman & Co., Springfield, Mass.  
 Diamond Expansion Bolt Co., 90 West St., New York.  
 H. B. Ives Co., New Haven, Ct.  
 Ohio Brass Co., Mansfield, O.  
 Henry Perkins Co., Bridgewater, Mass.  
 Paul S. Reeves & Son, Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.  
 I. S. Spencer's Sons, Guilford, Ct.  
 Veeder Mfg. Co., Hartford, Ct.  
 Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

**Castings, Connecting Rod—**  
 Buffalo Crucible Casting Co., Buffalo, N. Y.

**Castings, Copper—**  
 Bancroft & Co., Philadelphia, Pa.  
 Bridgeport Deoxidized Bronze & Metal Co., Bridgeport, Ct.  
 J. B. Chapman & Co., Springfield, Mass.  
 Eynon-Evans Mfg. Co., 1507 Clearfield St., Philadelphia, Pa.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.  
 Nolte Brass Co., Springfield, O.  
 Ohio Brass Co., Mansfield, O.  
 Paul S. Reeves & Son, Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.  
 Turner Brass Works, Sycamore, Ill.

**Castings, Crucible Steel—**  
 Bancroft & Co., Philadelphia, Pa.  
 Buffalo Crucible Casting Co., Buffalo, N. Y.  
 Chicago Steel Foundry Co., Chicago, Ill.  
 Crucible Steel Casting Co., Lansdowne, Pa.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 Lebanon Steel Casting Co., Lebanon, Pa.  
 Lunkenhimer Co., Cincinnati, O.  
 Thomas Prosser & Son, 26 Platt St., N. Y.  
 Western Malleable Steel Co., Detroit, Mich.

**Castings, Die Molded, Precision—**  
 Veeder Mfg. Co., Hartford, Ct.

**Castings, Dredging Machinery—**  
 Federal Steel Foundry Co., Chester, Pa.

- Castings, Dynamo and Motor—**  
 Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.  
 Crucible Steel Casting Co., Lansdowne, Pa.  
 W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.  
 Lebanon Steel Casting Co., Lebanon, Pa.  
 Morse Iron Works, Erie, Pa.  
 Geo. H. Smith Steel Casting Co., Milwaukee, Wis.  
 West Side Foundry Co., Troy, N. Y.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
- Castings, Engine, Marine—**  
 Federal Steel Foundry Co., Chester, Pa.
- Castings, Engine Model—**  
 Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.  
 Crucible Steel Casting Co., Lansdowne, Pa.
- Castings, Engine, Stationary—**  
 Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 Federal Steel Foundry Co., Chester, Pa.
- Castings, Finished—**  
 American Bridge Co. of New York, 30 Church St., New York.  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Buffalo Crucible Casting Co., Buffalo, N. Y.  
 Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.  
 Crucible Steel Casting Co., Lansdowne, Pa.  
 Empire Foundry Co., New Brunswick, N. J.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.  
 Hubley Mfg. Co., Lancaster, Pa.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Morgan Engineering Co., Alliance, O.  
 Ohio Brass Co., Mansfield, O.  
 Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia, Pa.
- Castings for Sugar Work—**  
 Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.  
 Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 Thomas Prosser & Son, 26 Platt St., N. Y.
- Castings, Furnace—**  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia, Pa.  
 Taylor-Wilson Mfg. Co., McKees Rocks, Pa.
- Castings, Galvanized, Gray Iron and Malleable—**  
 Cleveland Galvanizing Works, Cleveland.  
 Empire Foundry Co., New Brunswick, N. J.
- Link Belt Co., Inc., Philadelphia, Pa.  
 Wilcox, Crittenden & Co., Middletown, Ct.
- Castings, Gas and Gasoline Engine—**  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Buffalo Crucible Casting Co., Buffalo, N. Y.  
 Crucible Steel Casting Co., Lansdowne, Pa.  
 Empire Foundry Co., New Brunswick, N. J.  
 Hopson & Chapin Mfg. Co., New London, Ct.  
 Lebanon Steel Casting Co., Lebanon, Pa.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Morse Iron Works, Erie, Pa.  
 Thomas Prosser & Son, 26 Platt St., N. Y.  
 Richmond Foundry & Mfg. Co., Inc., Richmond, Va.  
 West Side Foundry Co., Troy, N. Y.
- Castings, Gear Blanks—**  
 Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Tropenas Steel Co., New Castle, Del.
- Castings, Governor—**  
 Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.
- Castings, Gray Iron—**  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 Alaska Freezer Co., Winchendon, Mass.  
 Bancroft & Co., Philadelphia, Pa.  
 Barnes Mfg. Co., Mansfield, Ohio.  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Browning Engineering Co., Cleveland, O.  
 Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 H. W. Caldwell & Son Co., Western Ave. 17th & 18th Sts., Chicago, Ill.  
 Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
 S. Cheney & Son, Manlius, N. Y.  
 Chicago Hardware Foundry Co., North Chicago, Ill.  
 Cleveland Galvanizing Works, Cleveland.  
 Cleveland Punch & Shear Works Co., Cleveland, O.  
 Columbia Grey Iron Co., Columbia, Pa.  
 J. K. Dimmick & Co., New Land Title Bldg., Philadelphia, Pa.  
 Empire Foundry Co., New Brunswick, N. J.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.  
 Stanley G. Flagg & Co., Philadelphia, Pa.  
 Forest City Foundry & Mfg. Co., Cleveland, O.  
 A. Garrison Foundry Co., Pittsburgh, Pa.  
 Haven Malleable Castings Co., Cincinnati, O.  
 Hilles & Jones Co., Wilmington, Del.  
 Hopson & Chapin Mfg. Co., New London, Ct.

Hubley Mfg. Co., Lancaster, Pa.  
 Humphrey & Sons, Joliet, Ill.  
 Hyde Park Foundry & Machine Co.,  
 Hyde Park, Pa.  
 Janney, Steinmetz & Co., Philadelphia.  
 Jarecki Mfg. Co., Erie, Pa.  
 W. A. Jones Foundry & Machine Co.,  
 142-164 W. North Ave., Chicago, Ill.  
 Keystone Farm Machine Co., York, Pa.  
 Thomas Laughlin Co., Portland, Me.  
 Homer F. Livermore, Boston, Mass.  
 Lynchburg Foundry Co., Lynchburg, Va.  
 Malleable Iron Works, New Britain, Ct.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Charles Millar & Son Co., Utica, N. Y.  
 Franklin Moore Co., Winsted, Ct.  
 Morgan Engineering Co., Alliance, O.  
 Morse Iron Works, Erie, Pa.  
 National Sewing Machine Co., Belvidere,  
 Ill.  
 North Bros. Mfg. Co., Lehigh Ave. &  
 American St., Philadelphia, Pa.  
 Pacific Iron Works, Bridgeport, Ct.  
 Palmers & De Mooy Foundry Co., Cleve-  
 land, O.  
 Henry Perkins Co., Bridgewater, Mass.  
 Philadelphia Roll & Machine Co., 23d  
 St. & Washington Ave., Philadelphia.  
 Pittsburgh Valve Foundry & Construc-  
 tion Co., Pittsburgh, Pa.  
 Poole Engineering & Machine Co., Balti-  
 more, Md.  
 Richmond Foundry & Mfg. Co., Inc.,  
 Richmond, Va.  
 Louis Sacks, Newark, N. J.  
 St. Louis Car Wheel Co., St. Louis, Mo.  
 Sessions Foundry Co., Bristol, Ct.  
 I. S. Spencer's Sons, Guilford, Ct.  
 Standard Clutch Mfg. Co., Sidney, O.  
 Standard Engineering Co., Ellwood City,  
 Pa.  
 Sterling Emery Wheel Mfg. Co., Tiffin, O.  
 Stoever Foundry & Mfg. Co., Myerstown,  
 Pa.  
 Susquehanna Casting Co., Wrightsville,  
 Pa.  
 Taylor & Fenn Co., Hartford, Ct.  
 Taylor & Boggis Foundry Co., Cleveland.  
 Universal Caster & Foundry Co., 1170  
 Broadway, New York.  
 Vilter Mfg. Co., Milwaukee, Wis.  
 Vulcan Iron Works, 28 No. Irving Ave.,  
 Chicago, Ill.  
 West Side Foundry Co., Troy, N. Y.  
 R. W. Whitehurst Co., Norfolk, Va.  
 Wilcox, Crittenden & Co., Inc., Middle-  
 town, Ct.

**Castings. Gun Iron—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
 Buffalo Foundry & Machine Co., Buffalo,  
 N. Y.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 Philadelphia Roll & Machine Co., 23d St.  
 & Washington Ave., Philadelphia, Pa.  
 Taylor-Wilson Mfg. Co., McKees Rocks,  
 Pa.

**Castings. Gun Metal—**

Lunkenheimer Co., Cincinnati, O.

**Castings. Hardened Surface Steel—**

Tropenas Steel Co., New Castle, Del.

**Castings. Ice Machine Fittings—**

H. W. Caldwell & Son Co., 17th St. and  
 Western Ave., Chicago, Ill.

**Castings. Iron—**

Abendroth & Root Mfg. Co., Newburgh,  
 N. Y.  
 American Bridge Co. of New York, 30  
 Church St., New York.  
 American Cast Iron Pipe Co., Birming-  
 ham, Ala.  
 American Tool & Machine Co., Boston.  
 Bancroft & Co., Philadelphia, Pa.  
 Barbour-Stockwell Co., Cambridgeport,  
 Mass.  
 Bausch Machine Tool Co., Brightwood,  
 Mass.  
 Belmont Iron Works, Inc., Philadelphia.  
 Bethlehem Foundry & Machine Co.,  
 South Bethlehem, Pa.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Birdsboro Steel Foundry & Machine Co.,  
 Birdsboro, Pa.  
 Birmingham Iron Foundry, Derby, Ct.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Bridgeport Deoxidized Bronze & Metal  
 Co., Bridgeport, Ct.  
 Brown & Sharpe Mfg. Co., Providence,  
 R. I.  
 Buffalo Foundry & Machine Co., Buffalo,  
 N. Y.  
 Builders Iron Foundry, Providence, R. I.  
 H. W. Caldwell & Son Co., Western  
 Ave., 17th & 18th Sts., Chicago, Ill.  
 Thos. Carlin's Sons Co., N. S. Pitts-  
 burgh, Pa.  
 Chambersburg Engineering Co., Cham-  
 bersburg, Pa.  
 Chattanooga Roofing & Foundry Co.,  
 Chattanooga, Tenn.  
 Columbia Grey Iron Co., Columbia, Pa.  
 J. K. Dimmick & Co., New Laud Title  
 Bldg., Philadelphia, Pa.  
 Empire Foundry Co., New Brunswick,  
 N. J.  
 Farrel Foundry & Mach. Co., Ansonia, Ct.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 A. W. Findlay Co., Inc., 23d and Market  
 Sts., Philadelphia, Pa.  
 Stanley G. Flagz & Co., Philadelphia, Pa.  
 Forest City Foundry & Mfg. Co., Cleve-  
 land, O.  
 Haven Malleable Castings Co., Cincin-  
 nati, O.  
 Hilles & Jones Co., Wilmington, Del.  
 Hopson & Chapin Mfg. Co., New London,  
 Ct.  
 Hubley Mfg. Co., Lancaster, Pa.  
 Humphreys Mfg. Co., Mansfield, O.  
 Humphrey Machine Co., Keene, N. H.  
 Janney, Steinmetz & Co., Philadelphia,  
 Pa.  
 Lynchburg Foundry Co., Lynchburg, Va.  
 McClave-Brooks Co., Scranton, Pa.  
 Mackintosh, Hemphill & Co., Pittsburgh,  
 Pa.  
 Malleable Iron Works, New Britain, Ct.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Chas. Millar & Son Co., Utica, N. Y.  
 Morgan Engineering Co., Alliance, O.  
 Morse Iron Works, Erie, Pa.  
 R. Munroe & Sons Mfg. Corporation,  
 Pittsburgh, Pa.  
 National Brake & Electric Co., Milwau-  
 kee, Wis.  
 Pacific Iron Works, Bridgeport, Ct.  
 Pennsylvania Engineering Works, New  
 Castle, Pa.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.  
 Pittsburgh Mfg. Co., Pittsburgh, Pa.  
 Poole Engineering & Machine Co., Baltimore, Md.  
 Robins Conveying Belt Co., Park Row Bldg., New York.  
 Royersford Foundry & Machine Co., Royersford, Pa.  
 Sessions Foundry Co., Bristol, Ct.  
 Soule Steam Feed Works, Meridian, Miss.  
 I. S. Spencer's Sons, Guilford, Ct.  
 Susquehanna Casting Co., Wrightsville, Pa.  
 Taylor & Boggis Foundry Co., Cleveland.  
 Taylor-Wilson Mfg. Co., McKees Rocks, Pa.  
 United Engineering & Foundry Co., Pittsburgh, Pa.  
 United States Cast Iron Pipe & Foundry Co., 71 Broadway, New York.  
 Vilter Mfg. Co., Milwaukee, Wis.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 West Side Foundry Co., Troy, N. Y.  
 Western Foundry & Sash Weight Co., St. Louis, Mo.  
 Robert Wetherill & Co., Chester, Pa.  
 Wheeling Mold & Foundry Co., Wheeling, W. Va.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**MERCHANTS.**

Reed F. Blair & Co., Pittsburgh, Pa.  
 Buell & Mitchell, 120 Liberty St., N. Y.  
 Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.  
 C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.  
 Homer F. Livermore, Boston, Mass.  
 F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

**Castings, Iron, Special—**

Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 Chicago Hardware Foundry Co., North Chicago, Ill.  
 Empire Foundry Co., New Brunswick, N. J.

Fawcuss Machine Co., Pittsburgh, Pa.  
 A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.  
 A. Garrison Foundry Co., Pittsburgh, Pa.  
 Humphrey Machine Co., Keene, N. H.  
 Lynchburg Foundry Co., Lynchburg, Va.  
 Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia.  
 Richmond Foundry & Mfg. Co., Inc., Richmond, Va.  
 Susquehanna Casting Co., Wrightsville, Pa.  
 United States Cast Iron & Foundry Co., 11 Broadway, New York.

**Castings, Iron, Thermit Process—**

Goldschmidt Thermit Co., 90 West St., New York.

**Castings, Lamp Post—**

A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.

**Castings, Lathe—**

Buffalo Foundry & Machine Co., Buffalo, N. Y.

Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.  
 Lebanon Steel Casting Co., Lebanon, Pa.  
 Morse Iron Works, Erie, Pa.  
 Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia.  
 West Side Foundry Co., Troy, N. Y.

**Castings, Lead—**

American Tool & Machine Co., Boston, Mass.  
 Diamond Expansion Bolt Co., 90 West St., New York.  
 Paul S. Reeves & Son, 1415 Catharine St., Philadelphia, Pa.  
 Turner Brass Works, Sycamore, Ill.

**Castings, Light Gray Iron—**  
 Richmond Foundry & Mfg. Co., Inc., Richmond, Va.

**Castings, Locomotive and Car—**

American Steel Foundries, 42 Broadway, New York.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Buffalo Crucible Casting Co., Buffalo, N. Y.  
 Buffalo Foundry & Machine Co., Buffalo, N. Y.

Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.  
 Crucible Steel Casting Co., Lansdowne, Pa.

Federal Steel Foundry Co., Chester, Pa.  
 Humphrey Machine Co., Keene, N. H.  
 Lebanon Steel Casting Co., Lebanon, Pa.  
 Morse Iron Works, Erie, Pa.  
 St. Louis Car Wheel Co., St. Louis, Mo.  
 Seaboard Steel Casting Co., Chester, Pa.  
 West Side Foundry Co., Troy, N. Y.

**Castings, Malleable Iron—**

Acme Steel & Malleable Iron Works, Buffalo, N. Y.  
 Bancroft & Co., Philadelphia, Pa.  
 Chisholm & Moore Mfg. Co., Cleveland, O.  
 Cleveland Galvanizing Works, Cleveland.  
 Columbus Malleable Casting Co., Columbus, O.

Fawcuss Machine Co., Pittsburgh, Pa.  
 Stanley G. Flagg & Co., Philadelphia, Pa.  
 Fort Pitt Malleable Iron Co., Pittsburgh, Pa.

Hammer & Co., Branford, Ct.  
 Haven Malleable Castings Co., Cincinnati, O.

Janney, Steinmetz & Co., Philadelphia.  
 Jarecki Mfg. Co., Erie, Pa.  
 Jeffrey Mfg. Co., Columbus, O.  
 Thomas Laughlin Co., Portland, Me.  
 Homer F. Livermore, Boston, Mass.  
 Malleable Iron Works, New Britain, Ct.  
 Morse Iron Works, Erie, Pa.  
 T. H. Symington Co., Baltimore, Md.  
 Walter W. Woodruff & Sons Co., Mt. Carmel, Ct.

**Castings, Malleable Steel—**

Western Malleable Steel Co., Detroit, Mich.

**Castings, Bronze—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
 J. B. Chapman & Co., Springfield, Mass.  
 Clum & Atkinson, Rochester, N. Y.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.  
 Lunkenheimer Co., Cincinnati, O.

Paul S. Reeves & Son, Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.

**Castings, Manganese Steel—**  
Bancroft & Co., Philadelphia, Pa.  
Buffalo Crucible Casting Co., Buffalo, N. Y.

Geo. H. Smith Steel Casting Co., Milwaukee, Wis.

Taylor Iron & Steel Co., High Bridge, N. J.

Tropenas Steel Co., New Castle, Del.

**Castings, Man Hole, Cistern, Cover, Sewer, Gutter, Crossing, &c.—**

(See Iron Work, Builders')

**Castings, Marine, Machine, &c.—**

Abendroth & Root Mfg. Co., Newburgh, N. Y.

American Steel Foundries, 42 Broadway, New York.

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

Bethlehem Steel Co., So. Bethlehem, Pa.

Buffalo Foundry & Machine Co., Buffalo, N. Y.

H. W. Caldwell & Son Co., 17th St. and Western Ave., Chicago, Ill.

Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.

Columbus Malleable Castings Co., Columbus, O.

Crucible Steel Casting Co., Lansdowne, Pa.

Empire Foundry Co., New Brunswick, N. J.

Fawcuss Machine Co., Pittsburgh, Pa.

A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.

Hilles & Jones Co., Wilmington, Del.

Hopson & Chapin Mfg. Co., New London, Conn.

Humphrey & Sons, Joliet, Ill.

Humphrey Machine Co., Keene, N. H.

Lebanon Steel Casting Co., Lebanon, Pa.

Morse Iron Works, Erie, Pa.

Pacific Iron Works, Bridgeport, Ct.

Henry Perkins Co., Bridgewater, Mass.

Thomas Prosser & Son, 26 Platt St., N.Y.

Richmond Foundry & Mfg. Co., Inc., Richmond, Va.

Seaboard Steel Casting Co., Chester, Pa.

Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

United States Cast Iron Pipe & Foundry Co., 71 Broadway, New York.

West Side Foundry Co., Troy, N. Y.

**Castings, Navy Ordnance Work—**

Federal Steel Foundry Co., Chester, Pa.

**Castings, Nickel Bronze—**

Indestructible Metal Co., 50 Church St., New York.

**Castings, Nickel, Bronze and Alloy—**

U. S. Indestructible Gasket Co., 50 Church St., New York.

**Castings, Nickel Steel—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Haven Malleable Castings Co., Cincinnati, O.

Lebanon Steel Casting Co., Lebanon, Pa.

Mesta Machine Co., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

Taylor Iron & Steel Co., High Bridge, N. J.

**Castings, Open Hearth—**

Federal Steel Foundry Co., Chester, Pa.

Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.

Mesta Machine Co., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Castings, Phosphor-Bronze—**

J. B. Chapman & Co., Springfield, Mass.

Clum & Atkinson, Rochester, N. Y.

Fawcuss Machine Co., Pittsburgh, Pa.

Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.

Lunkenheimer Co., Cincinnati, O.

Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Engineering Co., Alliance, O.

Nolte Brass Co., Springfield, O.

Ohio Brass Co., Mansfield, O.

Phosphor Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.

Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.

Paul S. Reeves & Son, Philadelphia, Pa.

Riverside Metal Co., Riverside, N. J.

Sheffield Car Co., Three Rivers, Mich.

**Castings, Piano Plate—**

Chicago Hardware Foundry Co., North Chicago, Ill.

Henry Perkins Co., Bridgewater, Mass.

**Castings, Plow—**

S. Cheney & Son, Manlius, N. Y.

Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.

Lebanon Steel Casting Co., Lebanon, Pa.

Lynchburg Foundry Co., Lynchburg, Va.

Morse Iron Works, Erie, Pa.

R. W. Whitehurst Co., Norfolk, Va.

**Castings, Precision—**

(See Castings, Die Molded.)

**Castings, Propeller Wheel—**

Federal Steel Foundry Co., Chester, Pa.

Pacific Iron Works, Bridgeport, Ct.

**Castings, Pulley—**

Chester Steel Castings Co., 407 Sansom St., Philadelphia, Pa.

Humphrey Machine Co., Keene, N. H.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Poole Engineering & Machine Co., Baltimore, Md.

**Castings, Railroad—**

Columbus Malleable Castings Co., Columbus, O.

A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.

Pacific Iron Works, Bridgeport, Ct.

St. Louis Car Wheel Co., St. Louis, Mo.

**Castings, Rolling Mill—**

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Birmingham Iron Foundry, Derby, Ct.

Buffalo Crucible Casting Co., Buffalo, N. Y.

**Buffalo Foundry & Machine Co.**, Buffalo, N. Y.  
**Thos. Carlin's Sons Co.**, N. S. Pittsburgh, Pa.  
**Chester Steel Castings Co.**, 407 Sansom St., Philadelphia, Pa.  
**Crucible Steel Casting Co.**, Lansdowne, Pa.  
**Fawcus Machine Co.**, Pittsburgh, Pa.  
**Federal Steel Foundry Co.**, Chester, Pa.  
**Lewis Foundry & Machine Co.**, Groveton, Pa.  
**Mackintosh, Hemphill & Co.**, Pittsburgh, Pa.  
**Mesta Machine Co.**, Pittsburgh, Pa.  
**Morgan Engineering Co.**, Alliance, O.  
**Pennsylvania Engineering Works**, New Castle, Pa.  
**Philadelphia Roll & Machine Co.**, 23d St. & Washington Ave., Philadelphia, Pa.  
**Poole Engineering & Machine Co.**, Baltimore, Md.  
**Seaboard Steel Casting Co.**, Chester, Pa.  
**United Engineering & Foundry Co.**, Pittsburgh, Pa.  
**Wellman-Seaver-Morgan Co.**, Cleveland, O.  
**Wheeling Mold & Foundry Co.**, Wheeling, W. Va.

**Castings, Semi-Steel—**  
**Bethlehem Foundry & Machine Co.**, So. Bethlehem, Pa.  
**Birmingham Iron Foundry**, Derby, Ct.  
**Buffalo Foundry & Machine Co.**, Buffalo, N. Y.  
**H. W. Caldwell & Son Co.**, Western Ave., 17th & 18th Sts., Chicago, Ill.  
**Fawcus Machine Co.**, Pittsburgh, Pa.  
**A. W. Findlay Co., Inc.**, 23d and Market Sts., Philadelphia, Pa.  
**Hammer & Co.**, Branford, Ct.  
**Lunkenheimer Co.**, Cincinnati, O.  
**Mackintosh, Hemphill & Co.**, Pittsburgh, Pa.  
**Mesta Machine Co.**, Pittsburgh, Pa.  
**Morgan Engineering Co.**, Alliance, O.  
**National Brake & Electric Co.**, Milwaukee, Wis.  
**Pittsburgh Valve, Foundry & Construction Co.**, Pittsburgh, Pa.  
**Taylor-Wilson Mfg. Co.**, McKees Rocks, Pa.

**Castings, Slag and Cinder Car**

**Federal Steel Foundry Co.**, Chester, Pa.  
**Castings, Special Alloys—**  
**Buffalo Crucible Casting Co.**, Buffalo, N. Y.

**Crucible Steel Casting Co.**, Lansdowne, Pa.

**West Side Foundry Co.**, Troy, N. Y.

**Castings, Stamp Mill—**  
**Buffalo Crucible Casting Co.**, Buffalo, N. Y.

**Buffalo Foundry & Machine Co.**, Buffalo, N. Y.

**Chester Steel Castings Co.**, 407 Sansom St., Philadelphia, Pa.

**Chrome Steel Works**, Chrome, N. J.

**Fawcus Machine Co.**, Pittsburgh, Pa.

**Federal Steel Foundry Co.**, Chester, Pa.

**Lebanon Steel Casting Co.**, Lebanon, Pa.

**Philadelphia Roll & Machine Co.**, 23d St. and Washington Ave., Philadelphia, Pa.

**Thomas Prosser & Son**, 26 Platt St., N.Y.

**Wellman-Seaver-Morgan Co.**, Cleveland, O.  
**Castings, Steam and Hydraulic Piping—**

**Federal Steel Foundry Co.**, Chester, Pa.  
**Castings, Steamship Construction—**

**Federal Steel Foundry Co.**, Chester, Pa.

**Castings, Steel—**  
**Acme Steel & Malleable Iron Works**, Buffalo, N. Y.

**American Bridge Co.**, of New York, 30 Church St., New York.

**American Steel Foundries**, 42 Broadway, New York.

**Bancroft & Co.**, Philadelphia, Pa.

**Bethlehem Steel Co.**, So. Bethlehem, Pa.

**Birdsboro Steel Foundry & Machine Co.**, Birdsboro, Pa.

**Buffalo Crucible Casting Co.**, Buffalo, N. Y.

**Chambersburg Engineering Co.**, Chambersburg, Pa.

**Chester Steel Castings Co.**, 407 Sansom St., Philadelphia, Pa.

**Chicago Steel Foundry Co.**, Chicago, Ill.

**Chrome Steel Works**, Chrome, N. J.

**Crucible Steel Casting Co.**, Lansdowne, Pa.

**Fawcus Machine Co.**, Pittsburgh, Pa.

**Federal Steel Foundry Co.**, Chester, Pa.

**A. W. Findlay Co., Inc.**, 23d and Market Sts., Philadelphia, Pa.

**Stanley G. Flagg & Co.**, Philadelphia, Pa.

**Hammer & Co.**, Branford, Ct.

**Janney, Steinmetz & Co.**, Philadelphia, Pa.

**Lebanon Steel Casting Co.**, Lebanon, Pa.

**Mackintosh, Hemphill & Co.**, Pittsburgh, Pa.

**Mesta Machine Co.**, Pittsburgh, Pa.

**National Brake & Electric Co.**, Milwaukee, Wis.

**Otis Steel Co., Ltd.**, Cleveland, O.

**Pittsburgh Valve, Foundry & Construction Co.**, Pittsburgh, Pa.

**Thomas Prosser & Son**, 26 Platt St., N.Y.

**Seaboard Steel Casting Co.**, Chester, Pa.

**Sharon Foundry Co.**, Sharon, Pa.

**Geo. H. Smith Steel Casting Co.**, Milwaukee, Wis.

**Taylor Iron & Steel Co.**, High Bridge, N. J.

**Tropenas Steel Co.**, New Castle, Del.

**United Engineering & Foundry Co.**, Pittsburgh, Pa.

**Wellman-Seaver-Morgan Co.**, Cleveland, O.

**A. P. Wittman & Co.**, 1223 Spring St., Philadelphia, Pa.

#### MERCHANTS.

**Buell & Mitchell**, 120 Liberty St., N. Y.

**Denman & Davis**, 85-91 Lafayette St., New York.

**Dilworth, Gilbert & Towne, Inc.**, 35-37 Wooster St., New York.

**Cal. Hirsch & Sons Iron & Rail Co.**, St. Louis, Mo.

**C. B. Houston & Co.**, Girard Trust Bldg., Philadelphia, Pa.

**Homer F. Livermore**, Boston, Mass.

**Edgar M. Moore & Co.**, Pittsburgh, Pa.

**F. B. Phillips & Sons Co.**, Pennsylvania Bldg., Philadelphia, Pa.

**Castings, Steel, Case Hardened—**  
**Tropenas Steel Co.**, New Castle, Del.

**Castings, Steel Elevator—**  
American Steel Foundries, 42 Broadway,  
New York

Buffalo Crucible Casting Co., Buffalo,  
N. Y.

Crucible Steel Casting Co., Lansdowne,  
Pa.

Tropenas Steel Co., New Castle, Del.

**Castings, Steel, Tempered—**  
Tropenas Steel Co., New Castle, Del.

**Castings, Steel, Thermit Process—**  
Goldschmidt Thermit Co., 90 West St.,  
New York.

**Castings, Stove—**  
S. Cheney & Son, Manlius, N. Y.

St. Louis Car Wheel Co., St. Louis, Mo.

**Castings, Sugar Mill—**  
Buffalo Foundry & Machine Co., Buffalo,  
N. Y.

**Castings, Tinned, Malleable and Gray Iron—**  
Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

**Castings, Tunnel—**  
Lynchburg Foundry Co., Lynchburg, Va.

Mesta Machine Co., Pittsburgh, Pa.

**Castings, Vanadium Steel—**  
Buffalo Crucible Casting Co., Buffalo,  
N. Y.

Crucible Steel Casting Co., Lansdowne,  
Pa.

Mesta Machine Co., Pittsburgh, Pa.

**Castings, Water Works—**  
Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

Buffalo Foundry & Machine Co., Buffalo,  
N. Y.

Builders Iron Foundry, Providence, R. I.

Crucible Steel Casting Co., Lansdowne,  
Pa.

Federal Steel Foundry Co., Chester, Pa.

A. W. Findlay Co., Inc., 23d and Market  
Sts., Philadelphia, Pa.

Humphrey Machine Co., Keene, N. H.

Lynchburg Foundry Co., Lynchburg, Va.

Charles Millar & Son Co., Utica, N. Y.

Philadelphia Roll & Machine Co., 23d St.  
& Washington Ave., Philadelphia, Pa.

Taylor-Wilson Mfg. Co., McKees Rocks,  
Pa.

United States Cast Iron Pipe & Foundry  
Co., 71 Broadway, New York.

West Side Foundry Co., Troy, N. Y.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Castings, White Metal—**  
Bancroft & Co., Philadelphia, Pa.

Cleveland Galvanizing Works, Cleveland,  
Ohio

Paul S. Reeves & Son, Philadelphia, Pa.

Richmond Foundry & Mfg. Co., Inc.,  
Richmond, Va.

Riverside Metal Co., Riverside, N. J.

Veeder Mfg. Co., Hartford, Ct.

West Side Foundry Co., Troy, N. Y.

York Pattern Works, York, Pa.

**Castings, Wrought Iron—**  
National Tube Co., Pittsburgh, Pa.

**Catalogue Printers and Publishers—**  
(See Printers and Publishers, Catalogue.)

**Catch Basin Covers—**  
(See Covers, Catch Basin.)

**Catchers, Grass, Lawn Mower—**

Ney Mfg. Co., Canton, O.

Philadelphia Lawn Mower Co., 3100-3108  
Chestnut St., Philadelphia, Pa.

Richards Mfg. Co., Aurora, Ill.

Specialty Mfg. Co., St. Anthony Park,  
Minn.

Supplies Hardware Co., Market and 5th  
Sts., Philadelphia, Pa.

Whitman & Barnes Mfg. Co., Chicago.

**Catchers, Mail—**  
Taylor & Boggis Foundry Co., Cleve-  
land, O.

**Catches, Barn Door—**  
S. Cheney & Son, Manlius, N. Y.

Lawrence Bros., Sterling, Ill.

**Catches, Basement Win-  
dow—**  
Caldwell Mfg. Co., Rochester, N. Y.

H. B. Ives Co., New Haven, Ct.

**Catches, Cupboard—**  
H. B. Ives Co., New Haven, Ct.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.

Shelby Spring Hinge Co., Shelby, O.

Taylor & Boggis Foundry Co., Cleve-  
land, O.

W. & J. Tiebout, 118 Chambers St., N.Y.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Catches, Door—**  
Ney Mfg. Co., Canton, O.

Richards Mfg. Co., Aurora, Ill.

**Catches, Elbow—**  
Ney Mfg. Co., Canton, O.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Catches, Fasteners and  
Latches, Refrigerator—**  
Arcade Mfg. Co., Freeport, Ill.

**Catches, Ice House—**  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Catches, Refrigerator—**  
H. B. Ives Co., New Haven, Ct.

**Catches, Screen Door—**  
Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Catches, Showcase—**  
Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Reading Hardware Co., Reading, Pa.

**Catches, Transom—**  
H. B. Ives Co., New Haven, Ct.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.



Shelby Spring Hinge Co., Shelby, O.  
Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Catches, Trunk—**  
J. H. Sessions & Son, Bristol, Ct.

**Catches, Window—**  
Caldwell Mfg. Co., Rochester, N. Y.  
H. B. Ives Co., New Haven, Ct.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.

Shelby Spring Hinge Co., Shelby, O.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Cattle Leaders—**  
(See Leaders, Cattle.)

**Cattle Licks—**  
(See Bricks, Salt, for Cattle.)

**Cattle Punches—**  
(See Punches, Cloth and Cattle.)

**Cattle Ties—**  
(See Ties, Cattle.)

**Ceiling and Siding, Iron  
or Steel—**  
American Sheet & Tin Plate Co., Pitts-  
burgh, Pa.

Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.

Empire Iron & Steel Co., Niles, O.  
Follansbee Bros. Co., Pittsburgh, Pa.  
Hazelton Sheet Steel Co., Hazelton, Pa.  
Newport Rolling Mill Co., Newport, Ky.  
New York Metal Ceiling Co., 537 W. 24th  
St., New York.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.  
Thomas Steel Co., Niles, O.

Alan Wood Iron & Steel Co., 519 Arch  
St., Philadelphia, Pa.

Youngstown Iron & Steel Roofing Co.,  
Youngstown, O.

Youngstown Sheet & Tube Co., Youngs-  
town, O.

**MERCHANTS.**  
Bourne-Fuller Co., Cleveland, O.

Merchant & Evans Co., Philadelphia, Pa.

Pierson & Co., 29 Broadway, New York.

Horace T. Potts & Co., 316-320 N. Third  
St., Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwaukee  
Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and  
Wayman Sts., Chicago, Ill.

**Ceiling Hooks—**  
(See Hooks, Chandelier or Lamp.)

**Ceiling Pulleys—**  
(See Pulleys, Ceiling.)

**Cellar Box Spring Cotters—**  
(See Cotters and Keys, Spring.)

**Celluloid Machinery—**  
Farrel Foundry & Machine Co., An-  
sonia, Ct.

**Cement—**  
Lawrence Cement Co., 1 Broadway, N. Y.

**Cement, Belting—**  
B. F. Elwell Glue Co., Rockport Mass.

Graton & Knight Mfg. Co., Worcester,  
Mass.

U. S. Chemi Belting Co., 109 S. Jefferson  
St., Chicago, Ill.

**Cement Drills—**  
(See Drills, Brick and Cement.)

**Cement for Disc Wheels—**  
Gardner Machine Co., Beloit, Wis.

**Cement, Iron—**  
S. Obermayer Co., Cincinnati, O.  
Smooth-On Mfg. Co., Jersey City, N. J.

**Cement Machinery—**  
Badger State Machine Co., Janesville,  
Wis.

Bethlehem Foundry & Machine Co.,  
South Bethlehem, Pa.

Link Belt Co., Inc., Philadelphia, Pa.

Henry Perkins Co., Bridgewater, Mass.

Thomas Prosser & Son, 26 Platt St., N. Y.

Webster Mfg. Co., 1075-1111 W. 15th St.,  
Chicago, Ill.

**Cement, Roofing—**  
Asphalt Ready Roofing Co., 136 Water  
St., New York.

Brown Hoisting Machinery Co., Cleve-  
land, O.

Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.

Eastern Granite Roofing Co., 19 Battery  
Place, New York.

National Roofing Co., Tonawanda, N. Y.

**Cement, Silica, Magnesia  
and Chrome—**

American Refractories Co., Commercial  
National Bank Bldg., Chicago, Ill.

**Cement, Stove—**  
Jos. Dixon Crucible Co., Jersey City, N. J.

**Cement, Switchboard—**  
U. S. Indestructible Gasket Co., 50  
Church St., New York.

**Center Drills, Gauges, Indi-  
cators, Testers—**

(See Drills, Gauges, Indicators, Testers.)

**Center Grinders, Lathe—**  
(See Grinders, Lathe Center.)

**Centering Chucks—**  
(See Chucks, Centering.)

**Centering Machines—**  
Espen-Lucas Machine Works, Broad and  
Noble Sts., Philadelphia, Pa.

Hendey Machine Co., Torrington, Ct.

National Machine Co., Hartford, Ct.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Pratt & Whitney Co., Hartford, Ct.

D. E. Whiton Machine Co., New London,  
Ct.

**MERCHANTS.**  
Marshall & Hirschart Machinery Co., 63  
S. Canal St., Chicago, Ill.

McDowell, Stocker & Co., 59 S. Canal  
St., Chicago, Ill.

Motch & Merryweather Machinery Co.,  
Cleveland, O.

Van Dyck-Churchill Co., 8 Dey St., N. Y.

**Centers, Indexing—**  
Becker Milling Machine Co., Hyde Park,  
Mass.

Brown & Sharpe Mfg. Co., Providence, R. I.

Cincinnati Milling Machine Co., Cincin-  
nati, O.

Garvin Machine Co., Spring & Varick Sts.,  
New York.

Gould & Eberhardt, Newark, N. J.

Hendey Machine Co., Torrington, Ct.

W. B. Knight Machinery Co., St. Louis,  
Mo.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Potter & Johnston Machine Co., Pawtucket, R. I.  
Pratt & Whitney Co., Hartford, Ct.  
Stockbridge Machine Co., Worcester, Mass.

**Centers, Planer and Shaper—**  
(Cincinnati Planer Co., Cincinnati, O.)  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Centers, Sash and Transom—**  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Susquehanna Casting Co., Wrightsville, Pa.

**Cesspools—**  
Barnes Mfg. Co., Mansfield, O.  
Fred J. Meyers Mfg. Co., Hamilton, O.

**Chafing Dishes—**  
(See Dishes, Chafing.)

**Chain, Automobile—**  
Diamond Chain & Mfg. Co., Indianapolis, Ind.

Morse Chain Co., Ithaca, N. Y.  
R. D. Nuttall Co., Pittsburgh, Pa.  
Whitney Mfg. Co., Hartford, Ct.

**Chain Belting, Hoists, &c.—**  
(See Belting, Hoists, &c.)

**Chain, Bicycle—**  
Diamond Chain & Mfg. Co., Indianapolis, Ind.

R. D. Nuttall Co., Pittsburgh, Pa.  
Whitney Mfg. Co., Hartford, Ct.

**Chain, Block—**  
Diamond Chain & Mfg. Co., Indianapolis, Ind.

Whitney Mfg. Co., Hartford, Ct.  
**Chain, Brake—**  
(See Chain, Railroad.)

**Chain, Brake, Electric Car—**  
New Castle Forge & Bolt Co., New Castle, Pa.

Standard Chain Co., Pittsburgh, Pa.

**Chain, Bronze, Brass, Iron and Steel—**  
Andrew B. Hendryx Co., New Haven, Ct.  
Indestructible Metal Co., 50 Church St., New York.

Thomas Morton, 183 Lafayette St., N. Y.  
Oneida Community, Ltd., Kenwood, N. Y.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Chain, Cable, Flat Link—**  
Diamond Chain & Mfg. Co., Indianapolis, Ind.

Thomas Morton, 183 Lafayette St., N. Y.

**Chain, Coll—**  
Bradlee & Co., Beach St. & E. Susquehanna Ave., Philadelphia, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Oneida Community, Ltd., Kenwood, N. Y.  
Standard Chain Co., Pittsburgh, Pa.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

Woodhouse Chain Works, Trenton, N. J.  
**Chain, Coll, German Patent—**

Standard Chain Co., Pittsburgh, Pa.

**Chain, Common Steel—**  
Standard Welding Co., Cleveland, O.

**Chain, Conveyor—**

H. W. Caldwell & Son Co., Western Ave. 17th and 18th Sts., Chicago, Ill.  
Diamond Chain & Mfg. Co., Indianapolis, Ind.

Interstate Engineering Co., Bedford, O.  
Link-Belt Co., Philadelphia, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Pawtucket Mfg. Co., Pawtucket, R. I.  
Standard Chain Co., Pittsburgh, Pa.  
Whitney Mfg. Co., Hartford, Ct.  
Wire Goods Co., Worcester, Mass.  
Woodhouse Chain Works, Trenton, N. J.

**Chain, Crane, Cable, &c.—**  
Bradlee & Co., Beach St. & E. Susquehanna Ave., Philadelphia, Pa.  
C. W. Hunt Co., West New Brighton, N. Y.

Jones & Laughlin Steel Co., Pittsburgh.  
New Castle Forge & Bolt Co., New Castle, Pa.

Pawtucket Mfg. Co., Pawtucket, R. I.  
Standard Chain Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**MERCHANTS**

Broderick & Bascom Rope Co., St. Louis.  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

Arthur C. Harvey Co., Boston, Mass.  
Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.

A. Leschen & Sons Rope Co., St. Louis.  
Wicks Bros., Saginaw, Mich.

**Chain, Detachable Link—**  
W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Link-Belt Co., Philadelphia, Pa.  
R. D. Nuttall Co., Pittsburgh, Pa.  
Whitney Mfg. Co., Hartford, Ct.

**Chain Dogs—**  
(See Dogs, Ring & Chain.)

**Chain, Driving—**  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.  
Diamond Chain & Mfg. Co., Indianapolis, Ind.

Link-Belt Co., Philadelphia, Pa.  
Morse Chain Co., Ithaca, N. Y.  
Whitney Mfg. Co., Hartford, Ct.

**Chain, Galvanized—**  
Cleveland Galvanizing Works, Cleveland.  
Oneida Community, Ltd., Kenwood, N. Y.  
Standard Chain Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Chain, Hoisting—**  
(See Chain, Crane, Cable, &c.)

**Chain Iron—**  
(See Iron, Chain.)

**Chain, Jack, Safety, Ladder, &c.—**

A. R. Hendryx & Co., New Haven, Ct.  
U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.  
Parker Wire Goods Co., Worcester, Mass.  
Plume & Atwood Mfg. Co., Waterbury, Ct.  
Smith & Egge Mfg. Co., Bridgeport, Ct.  
Turner & Stanton Co., Norwich, Ct.  
Wire Goods Co., Worcester, Mass.

**Chain, Ladder—**

(See Chain, Jack, Safety, &amp;c.)

**Chain Links and Chain—**

Bethlehem Foundry &amp; Machine Co., South Bethlehem, Pa.

Dodge Mfg. Co., Mishawaka, Ind.

Wm H. Haskell Mfg. Co., Pawtucket, R. I.

Keystone Drop Forge Works, Chester, Pa.

Kilborn &amp; Bishop Co., New Haven, Ct.

Link-Belt Co., Philadelphia, Pa.

New Castle Forge &amp; Bolt Co., New Castle, Pa.

Pawtucket Mfg. Co., Pawtucket, R. I.

Rhode Island Tool Co., Providence, R. I.

M. Seward &amp; Son Co., New Haven, Ct.

Standard Chain Co., Pittsburgh, Pa.

Taylor Iron &amp; Steel Co., High Bridge, N. J.

W. &amp; S. Mfg. Co., Worcester, Mass.

Whitman &amp; Barnes Mfg. Co., Chicago, Ill.

Wire Goods Co., Worcester, Mass.

**Chain, Lumber Boom—**

New Castle Forge &amp; Bolt Co., New Castle, Pa.

Standard Chain Co., Pittsburgh, Pa.

Woodhouse Chain Works, Trenton, N. J.

**Chain, Machine, German****Pattern—**

Standard Chain Co., Pittsburgh, Pa.

**Chain Machinery—**

Baird Machine Co., Oakville, Ct.

Diamond Chain &amp; Mfg. Co., Indianapolis, Ind.

Standard Chain Co., Pittsburgh, Pa.

Whitney Mfg. Co., Hartford, Ct.

**Chain Machinery, Bicycle—**

Adriance Machine Works, Brooklyn, N. Y.

E. W. Bliss Co., Brooklyn, N. Y.

Garvin Machine Co., Spring and Varick Sts., New York.

Waterbury Farrel Foundry &amp; Machine Co., Waterbury, Ct.

**Chain Machinery, Trace****and Coil Welded—**

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, O.

**Chain, Picture—**

Andrew B. Hendryx Co., New Haven, Ct.

Turner &amp; Stanton Co., Norwich, Ct.

**Chain, Plumbers'—**

(See Chain, Jack, Safety, &amp;c.)

**Chain, Pocket Wheel—**

Standard Chain Co., Pittsburgh, Pa.

Woodhouse Chain Works, Trenton, N. J.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Chain Pot Cleaners—**

(See Kitchen Articles, Wire.)

**Chain, Pump—**

Cleveland Galvanizing Works Co., Cleveland, O.

Garland Nut &amp; Rivet Co., Pittsburgh, Pa.

Oneida Community, Ltd., Kenwood, N. Y.

**Chain Pump Fixtures—**

(See Pump Fixtures, Chain.)

**Chain, Railroad, Brake,****Switch, &c.—**

New Castle Forge &amp; Bolt Co., New Castle, Pa.

Standard Chain Co., Pittsburgh, Pa.

Woodhouse Chain Works, Trenton, N. J.  
Yale & Towne Mfg. Co., 9 Murray St., New York.**Chain, Roller—**

Link-Belt Co., Inc., Philadelphia, Pa.

Whitney Mfg. Co., Hartford, Ct.

**Chain, Sash—**

Oneida Community, Ltd., Kenwood, N. Y.

U. T. Hungerford Brass &amp; Copper Co., 497-505 Pearl St., New York.

Thomas Morton, 183 Lafayette St., N. Y.

Wiebusch &amp; Hilger, Ltd., 106-110 Lafayette St., New York.

**Chain, Settee, Swing—**

Oneida Community, Ltd., Kenwood, N. Y.

**Chain, Sprocket—**

Diamond Chain &amp; Mfg. Co., Indianapolis, Ind.

Andrew B. Hendryx Co., New Haven, Ct.

Morse Chain Co., Ithaca, N. Y.

Thomas Morton, 183 Lafayette St., N. Y.

Standard Chain Co., Pittsburgh, Pa.

Whitney Mfg. Co., Hartford, Ct.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Chain, Steam Shovel and****Dredge—**

W. W. Patterson Co., Pittsburgh, Pa.

Standard Chain Co., Pittsburgh, Pa.

Woodhouse Chain Works, Trenton, N. J.

**Chain, Stud Link—**

Bradlee &amp; Co., Beach St. &amp; E. Susquehanna Ave., Philadelphia, Pa.

M. Lanz &amp; Sons, Pittsburgh, Pa.

Standard Chain Co., Pittsburgh, Pa.

Woodhouse Chain Works, Trenton, N. J.

**Chain, Switch—**

(See Chain, Railroad.)

**Chain, Ventilator—**

U. T. Hungerford Brass &amp; Copper Co., 497-505 Pearl St., New York.

**Chain, Well—**

Cleveland Galvanizing Works Co., Cleveland, O.

**Chains, Agricultural—**

Link-Belt Co., Philadelphia, Pa.

Oneida Community, Ltd., Kenwood, N. Y.

Standard Chain Co., Pittsburgh, Pa.

Whitman &amp; Barnes Mfg. Co., Chicago, Ill.

Woodhouse Chain Works, Trenton, N. J.

**Chains and Locks, Bag-****gage—**

Ames Sword Co., Chicopee, Mass.

**Chains, Anti-Spreader—**

Bridgeport Chain Co., Bridgeport, Ct.

**Chains, Binding or Log—**

Standard Chain Co., Pittsburgh, Pa.

**Chains, Bird Cage—**

Andrew B. Hendryx Co., New Haven, Ct.

Parker Wire Goods Co., Worcester, Mass.

**Chains, Breast—**

Covert Mfg. Co., Troy, N. Y.

(See also Chains, Wagon and Fancy.)

**Chains, Bushed—**

Bethlehem Foundry &amp; Machine Co., South Bethlehem, Pa.

Link-Belt Co., Philadelphia, Pa.

**Chains, Cart—**

Covert Mfg. Co., Troy, N. Y.

Oneida Community, Ltd., Kenwood, N. Y.

Standard Chain Co., Pittsburgh, Pa.

Woodhouse Chain Works, Trenton, N. J.

**Chains, Dog and Halter—**  
Covert Mfg. Co., Troy, N. Y.  
Andrew B. Hendryx Co., New Haven, Ct.  
Oneida Community, Ltd., Kenwood, N. Y.  
Smith & Egge Mfg. Co., Bridgeport, Ct.  
Standard Chain Co., Pittsburgh, Pa.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.  
Wire Goods Co., Worcester, Mass.  
Woodhouse Chain Works, Trenton, N. J.

**Chains, Flat Link—**  
Diamond Chain & Mfg. Co., Indianapolis, Ind.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
Link-Belt Co., Philadelphia, Pa.  
Thomas Morton, 183 Lafayette St., N. Y.  
Oneida Community, Ltd., Kenwood, N. Y.  
Rhode Island Tool Co., Providence, R. I.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Chains, Flower Basket—**  
Parker Wire Goods Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.

**Chains, Hammock—**  
Bridgeport Chain Co., Bridgeport, Ct.

**Chains, Hand Made—**  
W. W. Patterson Co., Pittsburgh, Pa.

**Chains, Harness—**  
Covert Mfg. Co., Troy, N. Y.  
Andrew B. Hendryx Co., New Haven, Ct.  
Standard Chain Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

**Chains, Heel—**  
Covert Mfg. Co., Troy, N. Y.  
Standard Chain Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

**Chains, Hobbie—**  
Standard Chain Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

**Chains, Hog—**  
M. Lanz & Sons, Pittsburgh, Pa.  
Link-Belt Co., Philadelphia, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

**Chains, Hydrant—**  
Bridgeport Chain Co., Bridgeport, Ct.

**Chains, Ice Elevator—**  
H. W. Caldwell & Son Co., 17th St. and Western Ave., Chicago, Ill.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
Link-Belt Co., Philadelphia, Pa.  
Rhode Island Tool Co., Providence, R. I.

**Chains, Key—**  
Ames Sword Co., Chicopee, Mass.  
Smith & Egge Mfg. Co., Bridgeport, Ct.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Chains, Loading, Steel—**  
Standard Chain Co., Pittsburgh, Pa.

**Chains, Log, Detachable—**  
Link-Belt Co., Philadelphia, Pa.

**Chains, Log, Rafting, &c.—**  
Bradlee & Co., Beach St. & E. Susquehanna Ave., Philadelphia, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.  
Standard Chain Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Chains, Measuring—**  
Keuffel & Esser Co., 127 Fulton St., New York.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Chains, Ox—**  
(See Chains, Log.)

**Chains, Picket, Staking Out—**  
Oneida Community, Ltd., Kenwood, N. Y.  
Standard Chain Co., Pittsburgh, Pa.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Chains, Pipe Hanging—**  
Woodhouse Chain Works, Trenton, N. J.

**Chains, Pipe Swing—**  
Oneida Community, Ltd., Kenwood, N. Y.

**Chains, Porch Swing—**  
Bridgeport Chain Co., Bridgeport, Ct.

**Chains, Post—**  
Covert Mfg. Co., Troy, N. Y.  
Oneida Community, Ltd., Kenwood, N. Y.

**Chains, Rein—**  
Covert Mfg. Co., Troy, N. Y.

**Chains, Sash and Attachments—**  
Bridgeport Chain Co., Bridgeport, Ct.  
Thomas Morton, 183 Lafayette St., N. Y.  
Oneida Community, Ltd., Kenwood, N. Y.  
Smith & Egge Mfg. Co., Bridgeport, Ct.  
Wire Goods Co., Worcester, Mass.

**Chains, Sash, Steel, Hot Galvanized—**  
Bridgeport Chain Co., Bridgeport, Ct.

**Chains, Ship—**  
Standard Chain Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

**Chains, Sling—**  
Bradlee & Co., Beach St. & E. Susquehanna Ave., Philadelphia, Pa.  
Byram & Co., Detroit, Mich.  
Link-Belt Co., Philadelphia, Pa.  
Standard Chain Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Chains, Stake—**  
(See Chains, Wagon and Fancy.)

**Chains, Staking Out—**  
(See Chains, Picket.)

**Chains, Stall—**  
Covert Mfg. Co., Troy, N. Y.  
Oneida Community, Ltd., Kenwood, N. Y.

**Chains, Stallion—**  
Covert Mfg. Co., Troy, N. Y.  
Oneida Community, Ltd., Kenwood, N. Y.

**Chains, Tie Out—**  
(See Chains, Picket, Staking Out.)

**Chains, Trace—**  
Covert Mfg. Co., Troy, N. Y.  
Standard Chain Co., Pittsburgh, Pa.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Chains, Transom—**  
Woodhouse Chain Works, Trenton, N. J.  
Thomas Morton, 183 Lafayette St., N. Y.  
Oneida Community, Ltd., Kenwood, N. Y.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-96 Lafayette St., New York.

**Chains, Wagon and Fancy—**  
Covert Mfg. Co., Troy, N. Y.  
Oneida Community, Niagara Falls, N. Y.  
Standard Chain Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

**Chains, Weldless—**  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Chains, Well—**

Cleveland Galvanizing Works, Cleveland.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Oneida Community, Ltd., Kenwood, N.Y.  
Standard Chain Co., Pittsburgh, Pa.  
Wielbusch & Hilger, Ltd., 106-110 Lafayette St., New York.

Woodhouse Chain Works, Trenton, N. J.

**Chair Bottom Knives—**

(See Knives, Machine.)

**Chairs and Settees, Lawn—**

Belmont Iron Works, Inc., Philadelphia.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Buffalo Wire Works Co., Buffalo, N. Y.  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Estey Wire Works Co., 59 Fulton St., New York.

G. Haarmann & Son, Holyoke, Mass.  
Howard & Morse, 45 Fulton St., N. Y.  
Keystone Farm Machine Co., York, Pa.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Nimmo Fence & Wire Works Co., Norwood, O.

Stewart Iron Works Co., Cincinnati, O.  
Van Dorn Iron Works, Cleveland, O.  
R. W. Whitehurst Co., Norfolk, Va.

**Chairs, Shop and Factory—**  
Manufacturing Equipment & Engineering Co., Boston, Mass.

**Chalk Line Reels—**

(See Reels, Chalk Line.)

**Chalk Lines—**

(See Lines, Chalk, Masons', &c.)

**Chandelier Hooks—**

(See Hooks, Chandelier.)

**Chandeliers—**

H. A. Matthews Mfg. Co., Seymour, Ct.

**Chandeliers and Wall Fixtures—**

Reading Hardware Co., Reading, Pa.

**Chandlery, Ship, Hardware—**

(See Ship Chandlery Hardware.)

**Channel Iron Work—**

(See Buildings and Bridges.)

**Channel, Shoe and Cobblers' Nails—**

(See Nails, Shoe, Cobblers', Channel, &c.)

**Channeling Machines, Mine and Quarry—**

Ingersoll-Rand Co., 11 Broadway, N. Y.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

**Channels—**

(See Beams and Channels.)

**Chaplets—**

(See Bolts, Anchor.)

**Chaplets, Foundry—**

Gem Mfg. Co., Pittsburgh, Pa.

**Charcoal—**

Springfield Facing Co., Springfield, Mass.  
Standard Tin Plate Co., Canonsburg, Pa.

**Charcoal, Filtering—**

S. Obermayer Co., Cincinnati, O.  
J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.

Springfield Facing Co., Springfield, Mass.

**Charging Machines, Billet—**

Alliance Machine Co., Alliance, O.

**Charging Machines, Furnace—**

Alliance Machine Co., Alliance, O.  
Morgan Engineering Co., Alliance, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**Charging Machines, Open Hearth—**

Alliance Machine Co., Alliance, O.  
John W. Seaver, Cleveland, O.

**Charging Machines, Pneumatic Locomotive—**

Norwalk Iron Works Co., So. Norwalk, Ct.

**Check Punches—**

(See Punches, Check.)

**Checks, Baggage, Key, &c.—**

American Railway Supply Co., 24 Park Place, New York.  
Bridgeport Brass Co., 253 Broadway, New York.

Eagle Lock Co., Terryville, Ct.

Geo. M. Ness, 61 Fulton St., New York.

Schwerdtle Stamp Co., Bridgeport, Ct.

Scovill Mfg. Co., Waterbury, Ct.

R. Woodman Mfg. & Supply Co., Boston.

**Checks, Door—**

Caldwell Mfg. Co., Rochester, N. Y.

**Checks, Door, Liquid and Air—**

Joseph Bardsley, 147 Baxter St., N. Y.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Checks, Door, Pneumatic—**

Arcade Mfg. Co., Freeport, Ill.

Joseph Bardsley, 147 Baxter St., N. Y.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Checks, Employees' Time—**

American Railway Supply Co., 24 Park Place, New York.

Hoggson & Pettis Mfg. Co., New Haven, Ct.

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

U. S. Indestructible Gasket Co., 50 Church St., New York.

R. Woodman Mfg. & Supply Co., Boston.

**Checks, Identification—**

U. S. Indestructible Gasket Co., 50 Church St., New York.

**Checks, Milk, Pool, &c.—**

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

Scovill Mfg. Co., Waterbury, Ct.

**Checks, Plantation—**

American Railway Supply Co., 24 Park Place, New York.

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

Scovill Mfg. Co., Waterbury, Ct.

**Checks, Repair—**

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Louis Sacks, Newark, N. J.

Scovill Mfg. Co., Waterbury, Ct.

**Checks, Trade—**

American Railway Supply Co., 24 Park Place, New York.

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

Scovill Mfg. Co., Waterbury, Ct.

R. Woodman Mfg. & Supply Co., Boston.

**Cheese Factory Scales—**

(See Scales, Cheese.)

**Cheese Knives, &c.—**

(See Knives, &c.)

**Chemical Apparatus—**

J. Bishop & Co., Malvern, Pa.  
Eimer & Amend, 205 Third Ave., N. Y.  
Stuart & Peterson Co., Burlington, N. J.

**Chemical Supplies—**

Eimer & Amend, 205 Third Ave., N. Y.  
Lalanc & Grosjean Mfg. Co., 299 Broadway, New York.

**Chemicals and Drugs—**

Eimer & Amend, 205 Third Ave., N. Y.

**Chemicals, Electroplating—**

Eimer & Amend, 205 Third Ave., N. Y.  
Hanson & Van Winkle Co., Newark, N. J.  
Zucker & Levett & Loeb Co., 529-530 West 25th St., New York.

**Chemists, Consulting and Analytical—**

Dearborn Drug & Chemical Works, Postal Telegraph Bldg., Chicago, Ill.  
Henry Souther Engineering Co., Hartford, Ct.

**Cherry Seeders and Stoners—**

(See Stoners.)

**Chest Handles, Hinges—**

(See Handles, Hinges.)

**Chests and Cabinets, Tool—**

American Tool Chest Co., 200 West Houston St., New York.  
Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.  
C. E. Jennings & Co., 42 Murray St., New York.  
Millers Falls Co., 28 Warren St., N. Y.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
James Swan Co., Seymour, Ct.

**Children's Trays—**

(See Trays, Card, &c., Silver Plated.)

**Chimes, Church and Band—**

Bevin Bros. Mfg. Co., East Hampton, Ct.

**Chimney Caps—**

(See Ventilators and Chimney Caps.)

**Chimney Tops—**

(See Tops, Chimney.)

**Chimneys, Brick—**

Kiln & Chimney Construction Co., Brooklyn, N. Y.

**Chimneys, Iron and Steel—**

American Bridge Co. of New York, 30 Church St., New York.

Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.

W. J. Clark Co., Salem, O.

Franklin Boiler Works Co., Troy, N. Y.

S. Freeman & Sons Mfg. Co., Racine, Wis.

Heine Safety Boiler Co., St. Louis, Mo.

E. Keeler Co., Williamsport, Pa.

Meehan Boiler & Construction Co., Lowellville, Pa.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

R. S. Newbold & Son Co., Norristown, Pa.

Northern Engineering Works, Detroit, Mich.

Pennsylvania Engineering Works, New Castle, Pa.

Petroleum Iron Works Co., Sharon, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and

Wayman Sts., Chicago, Ill.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

Tudor Boiler Mfg. Co., Cincinnati, O.

Virginia Bridge & Iron Co., Roanoke, Va.

Wickes Bros., Saginaw, Mich.

**Chimneys, Perforated Radial Brick—**

Kiln & Chimney Construction Co., Brooklyn, N. Y.

**Chippers, Ice—**

Alaska Freezer Co., Winchendon, Mass.

Dana Mfg. Co., Cincinnati, O.

North Bros. Mfg. Co., Philadelphia, Pa.

**Chisel Gauges, Grinders, Handles—**

(See Gauges, Grinders, Handles.)

**Chisels and Gouges, Socket—**

Buck Bros., Millbury, Mass.

John H. Graham & Co., 113 Chambers St., New York.

C. E. Jennings & Co., 42 Murray St., New York.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reliance Edge Tool Co., Youngstown, O.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

James Swan Co., Seymour, Ct.

Union Hardware Co., Torrington, Ct.

L. & I. J. White Co., Buffalo, N. Y.

Winsted Edge Tool Works, Winsted, Ct.

**Chisels and Gouges, Tanged—**

Buck Bros., Millbury, Mass.

John H. Graham & Co., 113 Chambers St., New York.

Irving Mfg. & Tool Co., 157 Chambers St., New York.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reliance Edge Tool Co., Youngstown, O.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

James Swan Co., Seymour, Ct.

Union Hardware Co., Torrington, Ct.

L. & I. J. White Co., Buffalo, N. Y.

Winsted Edge Tool Works, Winsted, Ct.

**Chisels, Box—**

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Elmore Tool Mfg. Co., Hartford, Ct.

Kilborn & Bishop Co., New Haven, Ct.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Chisels, Brick—**

Hubbard & Co., Pittsburgh, Pa.

Kilborn & Bishop Co., New Haven, Ct.

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

**Chisels, Calking—**

Kilborn & Bishop Co., New Haven, Ct.

**Chisels, Cape—**

Elmore Tool Mfg. Co., Hartford, Ct.

Hubbard & Co., Pittsburgh, Pa.

Kilborn & Bishop Co., New Haven, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Chisels, Chipping—**  
Hubbard & Co., Pittsburgh, Pa.  
**Chisels, Cold—**  
Billings & Spencer Co., Hartford, Ct.  
Buck Bros., Millbury, Mass.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Elmore Tool Mfg. Co., Hartford, Ct.  
Hubbard & Co., Pittsburgh, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Ney Mfg. Co., Canton, O.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Snell Mfg. Co., Fiskdale, Mass.  
Transue & Williams Co., Alliance, O.  
Tuck Mfg. Co., Brockton, Mass.  
Whitman & Barnes Mfg. Co., Chicago.

**Chisels, Cutters and Drills.**  
**Granite—**  
Ingersoll-Rand Co., 11 Broadway, New York.

Trow & Holden, Barre, Vt.

**Chisels, Diamond Point—**  
Elmore Tool Mfg. Co., Hartford, Ct.  
Hubbard & Co., Pittsburgh, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Chisels, Hot and Cold—**  
Heller Bros. Co., Newark, N. J.  
Hubbard & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Chisels, Ice—**  
(Also see Picks and Awls, Ice.)  
Alaska Freezer Co., Winchendon, Mass.  
American Fork & Hoe Co., Cleveland, O.  
Landers, Frary & Clark, New Britain, Ct.

**Chisels, Ice—**  
(See Ice Harvesting Tools.)

**Chisels, Machinists—**  
(See Chisels, Cold.)

**Chisels, Mortising, Hollow and Solid—**  
Job T. Pugh, 31st and Ludlow Sts., Philadelphia, Pa.

Wessman Tool Co., Rockford, Ill.  
**Chisels, R. R. Track—**  
Hubbard & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Chisels, Round Nose—**  
Hubbard & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Chisels, Side—**  
Hubbard & Co., Pittsburgh, Pa.  
**Chisels, Stone Cutters—**  
Hubbard & Co., Pittsburgh, Pa.

**Chisels, Wire—**  
Niagara Machine & Tool Works, Buffalo, N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Chocolate Pots—**  
(See Pots, Silver Plated.)

**Choppers—**  
(See Cutters, Meat, Food and Vegetable.)

**Christmas Tree Holders—**  
(See Holders, Christmas Tree.)

**Chromium—**  
Goldschmidt Thermit Co., 90 West St., New York.

Roesler & Hasslacher Chemical Co., 100 William St., New York.

**Chuckings and Turning Machines, Automatic—**  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Potter & Johnson Machine Co., Pawtucket, R. I.  
Pratt & Whitney Co., Hartford, Ct.

**Chuckings Machines—**  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Garvin Machine Co., Spring and Varick Sts., New York.  
Jones & Lamson Machine Co., Springfield, Vt.  
Potter & Johnston Machine Co., Pawtucket, R. I.  
Pratt & Whitney Co., Hartford, Ct.  
F. E. Reed Co., Worcester, Mass.

**MERCHANTS.**  
Hill, Clarke & Co., Boston, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co., Cleveland, O.  
A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
C. C. Wormer Machinery Co., Detroit, Mich.

**Chucks—**  
T. R. Almond Mfg. Co., Ashburnham, Mass.  
American Tool & Machine Co., Boston, Mass.  
Cincinnati Chuck Co., Cincinnati, O.  
Cushman Chuck Co., Hartford, Ct.  
Garvin Machine Co., Spring and Varick Sts., New York.  
Hardinge Bros., 1036 Lincoln Ave., Chicago, Ill.

Hoggson & Pettis Mfg. Co., New Haven, Ct.  
E. Horton & Son Co., Windsor Locks, Ct.  
Jacobs Mfg. Co., Hartford, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Oneida National Chuck Co., Oneida, N. Y.  
Pratt & Whitney Co., Hartford, Ct.  
D. Saunders' Sons, Yonkers, N. Y.  
Skinner Chuck Co., New Britain, Ct.  
Standard Tool Co., Cleveland, O.  
Union Mfg. Co., New Britain, Ct.  
Westcott Chuck Co., Oneida, N. Y.  
Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

D. E. Whiton Mach. Co., New London, Ct.  
**Chucks, Air—**  
Imperial Motor Co., Grove City, Pa.

**Chucks, Automatic Lever—**  
Potter & Johnston Machine Co., Pawtucket, R. I.

**Chucks, Centering—**  
Hoggson & Pettis Mfg. Co., New Haven, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Skinner Chuck Co., New Britain, Ct.  
Union Mfg. Co., New Britain, Ct.

Westcott Chuck Co., Oneida, N. Y.  
D. E. Whiton Mach. Co., New London, Ct.

**Chucks, Disc Grinder—**  
Gardner Machine Co., Beloit, Wis.

**Chucks, Drill—**  
T. R. Almond Mfg. Co., Ashburnham, Mass.

Cleveland Twist Drill Co., Cleveland, O.  
Cushman Chuck Co., Hartford, Ct.  
Goodell Mfg. Co., Greenfield, Mass.  
Goodell-Pratt Co., Greenfield, Mass.  
Hogson & Pettis Mfg. Co., New Haven, Ct.

E. Horton & Son Co., Windsor Locks, Ct.  
Jacobs Mfg. Co., Hartford, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Millers Falls Co., 28 Warren St., N. Y.  
Morse Twist Drill & Machine Co., New Bedford, Mass.

Niles-Bement-Pond Co., 111 Broadway, New York.

North Bros. Mfg. Co., Philadelphia, Pa.  
Oneida National Chuck Co., Oneida, N. Y.  
Pratt & Whitney Co., Hartford, Ct.

D. Saunders' Sons, Yonkers, N. Y.  
Schuchardt & Schutte, 90 West St., N.Y.  
Skinner Chuck Co., New Britain, Ct.

Standard Tool Co., Cleveland, O.  
Union Mfg. Co., New Britain, Ct.  
Westcott Chuck Co., Oneida, N. Y.

Whitman & Barnes Mfg. Co., Chicago.  
Whitney Mfg. Co., Hartford, Ct.  
D. E. Whiton Mach. Co., New London, Ct.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**Chucks for Boring and Turning Mills—**

E. W. Bliss Co., Brooklyn, N. Y.  
E. Horton & Son Co., Windsor Locks, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Union Mfg. Co., New Britain, Ct.  
Westcott Chuck Co., Oneida, N. Y.

**Chucks for Cutting Off Machines—**

Hogson & Pettis Mfg. Co., New Haven, Ct.

E. Horton & Son Co., Windsor Locks, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Oneida National Chuck Co., Oneida, N. Y.  
Skinner Chuck Co., New Britain, Ct.  
Westcott Chuck Co., Oneida, N. Y.

**Chucks, Independent, Universal—**

Cincinnati Chuck Co., Cincinnati, O.  
Hogson & Pettis Mfg. Co., New Haven, Ct.

E. Horton & Son Co., Windsor Locks, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Oneida National Chuck Co., Oneida, N. Y.  
Potter & Johnston Machine Co., Pawtucket, R. I.  
Westcott Chuck Co., Oneida, N. Y.

**Chucks, Lathe—**

T. R. Almond Mfg. Co., Ashburnham, Mass.

Cincinnati Chuck Co., Cincinnati, O.  
Cushman Chuck Co., Hartford, Ct.

Goodell-Pratt Co., Greenfield, Mass.  
Hogson & Pettis Mfg. Co., New Haven, Ct.

E. Horton & Son Co., Windsor Locks, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Oneida National Chuck Co., Oneida, N. Y.  
Pratt & Whitney Co., Hartford, Ct.

Skinner Chuck Co., New Britain, Ct.  
Union Mfg. Co., New Britain, Ct.

Westcott Chuck Co., Oneida, N. Y.  
D. E. Whiton Mach. Co., New London, Ct.

**Chucks, Milling Machine—**

Brown & Sharpe Mfg. Co., Providence.  
Hogson & Pettis Mfg. Co., New Haven, Ct.

E. Horton & Son Co., Windsor Locks, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Marshall & Hunschart Machinery Co., 62 S. Canal St., Chicago, Ill.

Niles-Bement-Pond Co., 111 Broadway, New York.

Oneida National Chuck Co., Oneida, N. Y.  
Skinner Chuck Co., New Britain, Ct.

Union Mfg. Co., New Britain, Ct.  
Westcott Chuck Co., Oneida, N. Y.

**Chucks, Planer—**

American Tool Works Co., Cincinnati, O.  
Cincinnati Planer Co., Cincinnati, O.

Fox Machine Co., Grand Rapids, Mich.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

New Haven Mfg. Co., New Haven, Ct.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Oneida National Chuck Co., Oneida, N. Y.  
Francis Reed Co., Worcester, Mass.

Skinner Chuck Co., New Britain, Ct.  
Union Mfg. Co., New Britain, Ct.

**Chucks, Spinning—**

Adriance Machine Works, Brooklyn, N. Y.  
E. W. Bliss Co., Brooklyn, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Chucks, Tap—**

E. Horton & Son Co., Windsor Locks, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Oneida National Chuck Co., Oneida, N. Y.  
Westcott Chuck Co., Oneida, N. Y.

**Chucks, Wire—**

Pratt & Whitney Co., Hartford, Ct.

**Church Chimes—**  
(See Chimes, Church and Band.)

**Churn Machinery and Tools—**

Peter Gerlach Co., Cleveland, O.

**Churns—**  
American Woodenware Mfg. Co., Toledo, O.

Richmond Cedar Works, Richmond, Va.

**Chute Linings—**  
Taylor Iron & Steel Co., High Bridge, N. J.

**Chutes, Coal—**  
W. J. Clark Co., Salem, O.

Gilbert & Bennett Mfg. Co., 277 Broadway, New York.



Hendrick Mfg. Co., Carbondale, Pa.  
C. W. Hunt Co., West New Brighton,

**N. Y.**  
Interstate Engineering Co., Bedford, O.  
Jeffrey Mfg. Co., Columbus, O.  
W. A. Jones Foundry & Machine Co.,  
142-164 W. North Ave., Chicago, Ill.  
Mathew Lanz & Sons, Pittsburgh, Pa.  
R. Munroe & Sons Mfg. Corporation,  
Pittsburgh, Pa.

Pennsylvania Engineering Works, New  
Castle, Pa.

Petroleum Iron Works Co., Sharon, Pa.  
Riter-Conley Mfg. Co., Pittsburgh, Pa.  
Wm. B. Scaife & Sons Co., Pittsburgh,  
Steel Basket Co., Cedar Rapids, Ia.

**Chutes, Extension—**  
(See Chutes, Coal.)

**Chutes, Tubular—**  
(See Chutes, Coal.)

**Cider Mill Teeth—**  
(See Teeth, Cider Mill.)

**Cider Mills—**  
(See Mills, Cider.)

**Cigar Boxes, Silver Plated—**  
(See Boxes and Jars.)

**Cinder Mills—**

**MERCHANTS.**  
Filling & Crane, Girard Bldg., Phila-  
delphia, Pa.

**Circles, Disc Grinder, Spiral  
Paper and Cloth—**  
Charles H. Besly & Co., 15-21 S. Clinton  
St., Chicago, Ill.

**Circular Saw Bench—**  
(See Bench, Circular Saw.)

**Circular Saws—**  
(See Saws, Circular.)

**Cistern Covers—**  
(See Iron Work, Builders'.)

**Cistern Pumps—**  
(See Pumps, Cistern.)

**Cisterns, Wooden—**  
Winship Mfg. Co., Racine, Wis.

**Clam Hooks—**  
(See Hooks, Clam.)

**Clamp Dogs, Drills—**  
(See Dogs, Drills.)

**Clamping Machines—**  
Zeh & Hahnemann Co., Newark, N. J.

**Clamps and Slides, Rope—**  
Broderick & Bascom Rope Co., St. Louis,  
A. Leichen & Sons Rope Co., St. Louis,

**Clamps, Belt—**  
Billings & Spencer Co., Hartford, Ct.

W. J. Clark Co., Salem, O.

Dodge Mfg. Co., Mishawaka, Ind.

Goodell-Pratt Co., Greenfield, Mass.

**Clamps, Boat Builders—**  
Thomas Laughlin Co., Portland, Me.

W. W. Patterson Co., Pittsburgh, Pa.

James L. Taylor Mfg. Co., Bloomfield,  
N. J.

Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

Walter W. Woodruff & Sons Co., Mt.  
Carmel, Ct.

**Clamps, Boiler—**  
A. L. Henderer's Sons, Wilmington, Del.

Wm. G. Le Count, So. Norwalk, Ct.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

James L. Taylor Mfg. Co., Bloomfield,  
N. J.

**Clamps, Box and Case—**  
R. C. Jenkinson & Co., Newark, N. J.

**Clamps, Cable Conduit—**  
Diamond Expansion Bolt Co., 90 West  
St., New York.

**Clamps, Cabinet, Carpen-  
ters', Machinists', Wood-  
workers', &c.—**

Chas. H. Besly & Co., 15-21 S. Clinton  
St., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.

Columbia Grey Iron Co., Columbia, Pa.

Goodell-Pratt Co., Greenfield, Mass.

Hammer & Co., Branford, Ct.

Oliver Machinery Co., Grand Rapids,  
Mich.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Reading Hardware Co., Reading, Pa.

L. S. Starrett Co., Athol, Mass.

Stow Flexible Shaft Co., 28th & Callow-  
hill Sts., Philadelphia, Pa.

James L. Taylor Mfg. Co., Bloomfield,  
N. J.

Western Tool & Mfg. Co., Springfield, O.

Walter W. Woodruff & Sons Co., Mt.  
Carmel, Ct.

**Clamps, Carriage—**  
Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Reading Hardware Co., Reading, Pa.

James L. Taylor Mfg. Co., Bloomfield,  
N. J.

Walter W. Woodruff & Sons Co., Mt.  
Carmel, Ct.

**Clamps, Carriage and Truck  
Makers', Spring—**

James L. Taylor Mfg. Co., Bloomfield,  
N. J.

**Clamps, Column—**  
James L. Taylor Mfg. Co., Bloomfield,  
N. J.

**Clamps, Come-Along Line-  
man's—**

John H. Graham & Co., 113 Chambers  
St., New York.

Irrington Mfg. Co., Irrington, N. J.

Mathias Klein & Sons, 87-89 W. Van  
Buren St., Chicago, Ill.

**Clamps, Curtain Frame—**  
Wrightsville Hardware Co., Wrightsville,  
Pa.

**Clamps, Dock Builders—**  
James L. Taylor Mfg. Co., Bloomfield,  
N. J.

**Clamps, Electrical Cable—**  
Diamond Expansion Bolt Co., 90 West  
St., New York.

**Clamps, Encircling—**  
(See Clamps, Column.)

**Clamps, Flanging—**  
Hilles & Jones Co., Wilmington, Del.

New Doty Mfg. Co., Janesville, Wis.

Wickes Bros., Saginaw, Mich.

**Clamps, Guy—**  
American Iron & Steel Mfg. Co., Leba-  
ron, Pa.

M. Lanz & Sons, Pittsburgh, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Clamps, Hay Rack—**  
(See Clamps, Rack, Hay.)

**Clamps, Header—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.

**Clamps, Hose—**

(See Hose Attachments.)

**Clamps, Ice Cream Freezer—**

Alaska Freezer Co., Winchendon, Mass.

**Clamps, Iron, Malleable—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Clamps, Key Seat—**

L. S. Starrett Co., Athol, Mass.

**Clamps, Measuring Bar—**

L. S. Starrett Co., Athol, Mass.

**Clamps, Miter—**

James L. Taylor Mfg. Co., Bloomfield, N. J.

**Clamps, Parallel—**

Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

L. S. Starrett Co., Athol, Mass.

**Clamps, Plow, Nutted—**

Upson Nut Co., Cleveland, O.

**Clamps, Pole—**

(See Telegraph and Telephone Pole Supplies.)

**Clamps, Quick Acting—**

James L. Taylor Mfg. Co., Bloomfield, N. J.

Tudor Mfg. Co., Taunton, Mass.

**Clamps, Quilt and Curtain Frame—**

Arcade Mfg. Co., Freeport, Ill.

Reading Hardware Co., Reading, Pa.

**Clamps, Rack, Hay—**

Louden Machinery Co., Fairfield, Ia.

F. E. Myers & Bro., Ashland, O.

**Clamps, Rule—**

L. S. Starrett Co., Athol, Mass.

**Clamps, Saw—**

Crescent Machine Co., Leetonia, O.

Henry Diston & Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.

New Britain Machine Co., New Britain, Ct.

Oliver Machinery Co., Grand Rapids, Mich.

Reading Hardware Co., Reading, Pa.

James L. Taylor Mfg. Co., Bloomfield, N. J.

**Clamps, Splicing—**

Cronk & Carrier Mfg. Co., Elmira, N. Y.

John H. Graham & Co., 113 Chambers St., New York.

Irrington Mfg. Co., Irvington, N. J.

Mathias Klein & Sons, 87-89 W. Van Buren Ct., Chicago, Ill.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Otis A. Smith, Rockfall, Ct.

**Clamps, Steel—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.

Excelsior Tool & Machine Co., E. St. Louis, Ill.

Goodell-Pratt Co., Greenfield, Mass.

A. L. Henderer's Sons, Wilmington, Del.

W. G. Le Count, East Norwalk, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

National Tube Co., Pittsburgh, Pa.

S. Obermayer Co., Cincinnati, O.

L. S. Starrett Co., Athol, Mass.

James L. Taylor Mfg. Co., Bloomfield, N. J.

J. H. Williams & Co., Brooklyn, N. Y.

**Clamps, Structural Work—**

Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.

National Tube Co., Pittsburgh, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

James L. Taylor Mfg. Co., Bloomfield, N. J.

**Clamps, Tank, Lavatory—**

Ireland & Matthews Mfg. Co., Detroit, Mich.

**Clamps, Toolmakers—**

Brown & Sharpe Mfg. Co., Providence, R. I.

Wm. S. Nicholls, 253 Broadway, N. Y.

L. S. Starrett Co., Athol, Mass.

James L. Taylor Mfg. Co., Bloomfield, N. J.

**Clamps, Trunk, Case and Box—**

R. C. Jenkinson & Co., Newark, N. J.

John E. Keim Mills, Inc., Buffalo, N. Y.

J. H. Sessions & Son, Bristol, Ct.

**Clamps, Vise—**

Prentiss Vise Co., 44 Barclay St., N. Y.

**Clamps, Wagon Spring—**

James L. Taylor Mfg. Co., Bloomfield, N. J.

**Clamps, Wire—**

Irrington Mfg. Co., Irvington, N. J.

Otis A. Smith, Rockfall, Ct.

**Clamps, Wire Rope—**

Broderick & Bascom Rope Co., St. Louis.

M. Lanz & Sons, Pittsburgh, Pa.

Thomas Laughlin Co., Portland, Me.

A. Leschen & Sons Rope Co., St. Louis.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Clapboard Gauges, Markers—**

(See Markers, Clapboard.)

**Clapboarding, Iron and Steel—**

(See Ceiling and Siding, Iron and Steel.)

**Clamps, Hoop and Pail—**

Acme Steel Goods Co., 2324-2340 Archer Ave., Chicago, Ill.

Cary Mfg. Co., 19-21 Roosevelt St., N. Y.

E. H. Titchener & Co., Binghamton, N. Y.

**Clamps, Pencil—**

Stanley Rule & Level Co., New Britain, Ct.

**Claw Bars—**

(See Bars, Crow and Claw.)

**Claws, Coal—**

Wrightsville Hardware Co., Wrightsville, Pa.

**Claws, Tack—**

Arcade Mfg. Co., Freeport, Ill.

Elmore Tool Mfg. Co., Hartford, Ct.

Keystone Drop Forge Works, Chester, Pa.

Landers, Frary & Clark, New Britain, Ct.

H. H. Mayhew Co., Shelburne Falls, Mass.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Whitman & Barnes Mfg. Co., Chicago.

J. H. Williams & Co., Brooklyn, N. Y.

**Clay, Fire—**

Cyrus Borgner Co., 23d St. above Race, Philadelphia, Pa.

Brighton Fire Brick Co., New Brighton, Pa.

J. Gilmour, Bennett Bldg., New York.

Henry Maurer & Son, 420 E. 23d St., N. Y.

S. Obermayer Co., Cincinnati, O.  
 J. W. Paxson Co., Philadelphia, Pa.  
 M. D. Valentine & Bro. Co., Woodbridge,  
 N. J.

**Clay Shovels—**  
 (See Shovels, Brick.)

**Clay Working Machinery—**  
 Chambers Bros. & Co., 52d St. below Lancaster Ave., Philadelphia, Pa.

**Clay Working Machinery for Sewer Pipe Factories—**  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Cleaner, Wall Paper and Fresco—**

H. B. Fuller, St. Paul, Minn.

**Cleaners, Bar—**

Osborn Mfg. Co., Cleveland, O.

**Cleaners, Boiler—**

(See Cleaners, Flue.)

**Cleaners, Bottle and Lamp**

**Chimney—**

Fred J. Meyers Mfg. Co., Hamilton, O.

**Cleaners, Drain—**

American Fork & Hoe Co., Cleveland, O.

Hubbard & Co., Pittsburgh, Pa.

Iwan Bros., South Bend, Ind.

**Cleaners, File—**

Manning, Maxwell & Moore, Ind., 85 Liberty St., New York.

Nicholson File Co., Providence, R. I.

**Cleaners, Finger Nail, Combination—**

Billings & Spencer Co., Hartford, Ct.

**Cleaners, Flue—**

Gem Mfg. Co., Pittsburgh, Pa.

Jarecki Mfg. Co., Erie, Pa.

E. Keeler Co., Williamsport, Pa.

Manning, Maxwell & Moore, Ind., 85 Liberty St., New York.

Fred J. Meyers Mfg. Co., Hamilton, O.

Millers Falls Co., 28 Warren St., N. Y.

Osborn Mfg. Co., Cleveland, O.

J. W. Paxson Co., Philadelphia, Pa.

Reversible Tube Cleaner Co., Worcester

Mass.

(See also Scrapers, Stove.)

**Cleaners, Knife—**

(See Polishers, Knife.)

**Cleaners, Lawn—**

Supplee Hardware Co., Market and 5th

Sts., Philadelphia, Pa.

**Cleaners, Plate, Pan and**

**Kettle—**

Lasher Mfg. Co., Davenport, Ia.

**Cleaners, Portable Vacuum—**

Chicago Pneumatic Tool Co., Fisher

Bldg., Chicago, Ill.

Connorsville Blower Co., Connorsville,

Ind.

Taylor Machinery Co., Boston, Mass.

**Cleaners, Pot—**

(See Kitchen Articles, Wire; also Scrapers, Kettle.)

**Cleaners, Sewer—**

Osborn Mfg. Co., Cleveland, O.

**Cleaners, Shot Gun—**

Reversible Tube Cleaner Co., Worcester,

Mass.

J. Stevens Arms & Tool Co., Chicopee

Falls, Mass.

**Cleaners, Sidewalk—**

American Fork & Hoe Co., Cleveland, O.

Avery Stamping Co., Cleveland, O.

Hubbard & Co., Pittsburgh, Pa.

**Cleaners, Sink—**

Lasher Mfg. Co., Davenport, Ia.

New York Stamping Co., Brooklyn, N. Y.

Osborn Mfg. Co., Cleveland, O.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Cleaners, Tube—**

(See Cleaners, Flue.)

**Cleaners, Window—**

Benjamin P. Forbes, Cleveland, O.

Parker Wire Goods Co., Worcester, Mass.

F. H. Smith Mfg. Co., 18-30 W. Randolph

St., Chicago, Ill.

**Clearer Springs—**

(See Springs, Clearer.)

**Cleats, Brass and Galva-**

**nized—**

Thomas Laughlin Co., Portland, Me.

W. & J. Tiebout, 118 Chambers St., N. Y.

Wilcox, Crittenden & Co., Inc., Middle-

town, Ct.

**Cleats, Line and Rope—**

Bethlehem Foundry & Machine Co., So.

Bethlehem, Pa.

Parker Wire Goods Co., Worcester, Mass.

Reading Hardware Co., Reading, Pa.

R. W. Whitehurst Co., Norfolk, Va.

Wire Goods Co., Worcester, Mass.

**Cleaver Handles—**

(See Handles, Grass Hook, &c.)

**Cleavers, Butcher, Family,**

**&c.—**

Geo. H. Bishop & Co., Cincinnati, O.

John Chatillon & Sons, 85-93 Cliff St.,

New York.

Clauss Shear Co., Fremont, O.

Landers, Frary & Clark, New Britain, Ct.

L. & I. J. White Co., Buffalo, N. Y.

**Clevises, Steel—**

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Climbers, Lineman's—**

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Irrington Mfg. Co., Irvington, N. J.

Kilborn & Bishop Co., New Haven, Ct.

Mathias Klein & Son, 87-89 W. Van

Buren St., Chicago, Ill.

**Clinch Rings, Rivets—**

(See Rings, Rivets.)

**Clinometers—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Clip Machinery, Paper—**

Baird Machine Co., Oakville, Ct.

**Clippers and Shear, Com-**

**bined—**

Roberts Mfg. Co., Somerville, Mass.

**Clippers, Bolt and Rivet—**

Chambers Bros. & Co., 52d St. below

Lancaster Ave., Philadelphia, Pa.

Helwig Mfg. Co., St. Paul, Minn.

Irrington Mfg. Co., Irvington, N. J.

Manning, Maxwell & Moore, Inc., 85 Lib-

erty St., New York.

Peck, Stow & Wilcox Co., 27 Murray St.,

New York.

H. K. Porter, Everett, Mass.

Roberts Mfg. Co., Somerville, Mass.

**Clippers, Finger Nail—**

H. C. Cook & Co., Ansonia, Ct.

**Clippers, Horse and Toilet—**

American Shearer Mfg. Co., Nashua,

N. H.

Hermann Boker & Co., 101-103 Duane St.,

New York.

Brown & Sharpe Mfg. Co., Providence,

R. I.

Coates Clipper Mfg. Co., Worcester, Mass.

- John H. Graham & Co.,** 113 Chambers St., New York.
- Edward S. Hotchkiss,** Bridgeport, Ct.
- Wiebush & Hilger, Ltd.,** 106-110 Lafayette St., New York.
- Clippers, Power, Horse—**  
American Shearer Mfg. Co., Nashua, N.H.  
Chicago Flexible Shaft Co., 124-126 La Salle Ave., Chicago, Ill.
- Coates Clipper Mfg. Co.,** Worcester, Mass.
- Clippers, Stay Bolt—**  
(See Cutters, Stay Bolt.)
- Clips, Axle, Spring Bar, &c.—**  
E. D. Clapp Mfg. Co., Auburn, N. Y.  
Richard Eccles Co., Auburn, N. Y.  
Scranton Forging Co., Scranton, Pa.  
M. Seward & Son Co., New Haven, Ct.  
Upson Nut Co., Cleveland, O.
- Clips, Carriage Trimmers' &c.—**  
United States Clothes Pin Co., Montpelier, Vt.
- Clips, Damper—**  
Arcade Mfg. Co., Freeport, Ill.  
Berger Brothers Co., 231-237 Arch St., Philadelphia, Pa.  
S. M. Howes Co., Boston, Mass.  
Taylor & Boggis Foundry Co., Cleveland, O.
- Wrightsville Hardware Co.,** Wrightsville, Pa.
- Clips, Paper—**  
(See Stationers' Hardware.)
- Clips, Photographers'—**  
United States Clothes Pin Co., Montpelier, Vt.
- Clips, Single and Double Tree—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Clips, Toe and Motor Cycle—**  
Bevin Bros. Mfg. Co., E. Hampton, Ct.
- Clips, Trolley Wire—**  
(See Trolley Materials, Electric.)
- Clips, Umbrella—**  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.
- Clips, Wagon Axle—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Clips, Wire Rope—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Mathew Lanz & Sons, Pittsburgh, Pa.  
Thomas Laughlin Co., Portland, Me.  
A. Leichen & Sons Rope Co., St. Louis, Mo.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
C. M. Mockbee, Cincinnati, O.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.  
Williamsport Wire Rope Co., Williamsport, Pa.  
Wright Wire Co., Palmer, Mass.
- Clock Machinery—**  
Blake & Johnson Co., Waterbury, Ct.  
E. Howard Clock Co., Boston, Mass.  
Waltham Machine Works, Waltham, Mass.
- Clock Movements—**  
E. Howard Clock Co., Boston, Mass.
- Clock Springs—**  
(See Springs.)
- Clock Supplies—**  
Ansonia Clock Co., 99 John St., New York.
- Clocks—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
Ansonia Clock Co., 99 John St., New York.  
Goodwin & Kintz Co., Winsted, Ct.  
E. Howard Clock Co., Boston, Mass.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.  
Sessions Clock Co., Forestville, Ct.
- Clocks, Electric—**  
E. Howard Clock Co., Boston, Mass.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.
- Clocks, House, Office, &c.—**  
Ansonia Clock Co., 99 John St., New York.  
E. Howard Clock Co., Boston, Mass.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.  
Sessions Clock Co., Forestville, Ct.
- Clocks, Locomotive and Engine Room—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
Ashton Valve Co., Boston, Mass.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
E. Howard Clock Co., Boston, Mass.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.
- Clocks, Marine—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
Ansonia Clock Co., 99 John St., New York.  
Ashton Valve Co., Boston, Mass.  
E. Howard Clock Co., Boston, Mass.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.
- Clocks, Non-Magnetic—**  
Riggs & Bro., 310 Market St., Philadelphia, Pa.
- Clocks, Programme—**  
E. Howard Clock Co., Boston, Mass.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.
- Clocks, Regulator—**  
Ansonia Clock Co., 99 John St., New York.  
E. Howard Clock Co., Boston, Mass.
- Clocks, Tower—**  
E. Howard Clock Co., Boston, Mass.
- Clocks, Watchman's—**  
Hardinge Bros., 1036 Lincoln Ave., Chicago, Ill.  
Holtzer-Cabot Electric Co., Boston, Mass.  
E. Howard Clock Co., Boston, Mass.  
Nanz Clock Co., 127 Duane St., N. Y.  
W. R. Ostrander & Co., 22 Dey St., N. Y.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.
- Closets, Clothes—**  
(See Lockers, Office and Shop.)
- Cloth Battery, Brass and Steel—**  
Estey Wire Works Co., 59 Fulton St., New York.  
W. S. Tyler Co., Cleveland, O.
- Cloth, Bolting—**  
Case Crane Co., Columbus, O.  
Estey Wire Works Co., 59 Fulton St., New York.  
Michigan Wire Cloth Co., Detroit, Mich.  
W. S. Tyler Co., Cleveland, O.

**Cloth, Carborundum—**  
Carborundum Co., Niagara Falls, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Cloth Dryers—**  
(See Dryers, Cloth and Cotton.)

**Cloth, Dusting—**  
Carpenter-Morton Co., Boston, Mass.

**Cloth, Emery—**  
Baeder, Adamson & Co., 210 Chestnut St., Philadelphia, Pa.  
Carborundum Co., Niagara Falls, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Cloth, Fruit Drying, Galvanized—**  
Michigan Wire Cloth Co., Detroit, Mich.  
New Jersey Wire Cloth Co., Trenton, N.J.

**Cloth, Tracing—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Cloth, Window Screen—**  
I. E. Palmer Co., Middletown, Ct.

**Cloth, Window Screen Wire—**  
American Sales Co., 45 Lake St., Chicago, Ill.

Buffalo Wire Works Co., Buffalo, N. Y.  
Clinton Wire Cloth Co., Clinton, Mass.  
Dufur & Co., Baltimore, Md.  
Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Ludlow-Saylor Wire Co., St. Louis, Mo.  
Michigan Wire Cloth Co., Detroit, Mich.  
New Jersey Wire Cloth Co., Trenton, N.J.  
New York Wire Cloth Co., 102 Chambers St., New York.

Wickwire Bros., Cortland, N. Y.  
Wright Wire Co., Worcester, Mass.

**Cloth, Wire—**  
Buffalo Wire Works Co., Buffalo, N. Y.  
Clinton Wire Cloth Co., Clinton, Mass.  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Estey Wire Works Co., 59 Fulton St., New York.

Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Howard & Morse, 45 Fulton St., N. Y.  
Irving Mfg. & Tool Co., 157 Chambers St., New York.

Ludlow-Saylor Wire Co., St. Louis, Mo.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Michigan Wire Cloth Co., Detroit, Mich.  
New Jersey Wire Cloth Co., Trenton, N.J.  
Phosphor Bronze Smelting Co., 220 Washington Ave., Philadelphia, Pa.

W. S. Tyler Co., Cleveland, O.  
Wickwire Bros., Cortland, N. Y.  
Wright Wire Co., Worcester, Mass.  
(See also Cloth, Window Screen.)

**Cloth, Wire, Rolled—**  
New Jersey Wire Cloth Co., Trenton, N.J.

**Clothes Brushes—**  
(See Brushes, Silver Plated.)

**Clothes Dryers, Hangers, &c.—**

(See Dryers, Hangers, &c.)

**Clothes Line Hooks, &c.—**

(See Hooks, Clothes Line, &c.)

**Clothes Pin Machinery—**

Humphrey Machine Co., Keene, N. H.

**Clothes Pins—**

(See Pins, Clothes.)

**Club Houses, Portable—**  
(See Houses, Portable.)

**Clubs, Indian—**  
Piqua Handle & Mfg. Co., Piqua, O.  
John Sommer Faucet Co., Newark, N. J.

**Clutches, Automatic—**  
Humphrey Machine Co., Keene, N. H.

**Clutches, Drill, Spindle Stop—**

Gem Mfg. Co., Pittsburgh, Pa.  
**Clutches for Bottoming Taps—**

Helwig Mfg. Co., St. Paul, Minn.

**Clutches, Friction—**  
Adriance Machine Works, Brooklyn, N. Y.

American Tool & Machine Co., Boston, American Well Works, Aurora, Ill.

E. W. Bliss Co., Brooklyn, N. Y.  
Brown Hoisting Machinery Co., Cleveland, H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. E. Caldwell Co., Inc., Louisville, Ky.  
Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.

Dodge Mfg. Co., Mishawaka, Ind.  
Eastern Machinery Co., New Haven, Ct.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Ferracute Machine Co., Bridgeton, N. J.  
Carlyle Johnson Machine Co., Hartford, Ct.

Jones & Laughlin Steel Co., Pittsburgh, W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Link-Belt Co., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morgan Construction Co., Worcester, Mass.

New Haven Mfg. Co., New Haven, Ct.  
Poole Engineering & Machine Co., Baltimore, Md.

Pratt & Whitney Co., Hartford, Ct.  
A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.

Standard Clutch Mfg. Co., Sidney, O.  
Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

Wellman-Seaver-Morgan Co., Cleveland, O.  
T. B. Wood's Sons Co., Chambersburg, Pa.

**Clutches, Jaw—**  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. E. Caldwell Co., Inc., Louisville, Ky.  
Dodge Mfg. Co., Mishawaka, Ind.

Eastern Machinery Co., New Haven, Ct.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Link-Belt Co., Philadelphia, Pa.  
Poole Engineering & Machine Co., Baltimore, Md.

Standard Clutch Mfg. Co., Sidney, O.  
Webster Mfg. Co., 1075 W. 15th St., Chicago, Ill.

T. B. Wood's Sons Co., Chambersburg, Pa.

**Clutches, Variable Speed—**  
Variable Speed Clutch Co., Milwaukee, Wis.

**Clutches, Wood Split Pulley—**  
Dodge Mfg. Co., Mishawaka, Ind.

Reeves Pulley Co., Columbus, Ind.

**Coal—**

Bessemer Coke Co., Pittsburgh, Pa.  
Columbus Iron & Steel Works, Columbus, O.  
Jamison Coal & Coke Co., Pittsburgh, Pa.  
La Belle Iron Works Co., Steubenville, O.  
Pilling & Orane, Girard Bldg., Philadelphia, Pa.  
Tennessee Coal, Iron & Railroad Co., 71 Broadway, New York.  
Washington Coal & Coke Co., Pittsburgh, Pa.

**MERCHANTS.**

J. K. Dimmick & Co., New Land Title Bldg., Philadelphia, Pa.  
J. H. Hillman & Son, Pittsburgh, Pa.  
C. B. Houston & Co., Girard Trust Bldg., Philadelphia, Pa.  
Ernest Law & Co., 15th & Market Sts., Philadelphia, Pa.  
J. J. Mohr, Bullitt Bldg., Philadelphia, Pa.  
Potts & Wittman, North American Bldg., Philadelphia, Pa.

**Coal and Ash Handling Stations for Locomotives and Power Houses—**

Browning Engineering Co., Cleveland, O.  
C. W. Hunt Co., West New Brighton, N. Y.

Interstate Engineering Co., Bedford, O.  
Jeffrey Mfg. Co., Columbus, O.

**Coal Cars, Hods, Scales, &c.—**

(See Cars, Hods, Scales, &c.)

**Coal Compressing Machinery—**

(See Compressing Machinery, Coal.)

**Coal Cutters—**

Ingersoll-Rand Co., 11 Broadway, New York.

Jeffrey Mfg. Co., Columbus, O.

Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

**Coal Elevators and Conveyors—**

Gifford-Wood Co., Hudson, N. Y.

**Coal Handling Machinery—**

Broderick & Bascom Rope Co., St. Louis.  
Brown Hoisting Machinery Co., Cleveland.  
Browning Engineering Co., Cleveland, O.  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.  
Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.

Cleveland Punch & Shear Works Co., Cleveland, O.

C. W. Hunt Co., West New Brighton, N. Y.

Interstate Engineering Co., Bedford, O.

Jeffrey Mfg. Co., Columbus, O.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Arthur Koppel Co., Pittsburgh, Pa.

A. Leschen & Sons Rope Co., St. Louis.

Lidgerwood Mfg. Co., 96 Liberty St., New York.

Link-Belt Co., Philadelphia, Pa.

Robins Conveying Belt Co., Park Row Bldg., New York.

A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.

Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

Wellman-Seaver-Morgan Co., Cleveland, O.  
Ernst Wiener Co., Church and Fulton Sts., New York.

**Coal Handling Machinery, Electric—**

Brown Hoisting Machinery Co., Cleveland.  
C. W. Hunt Co., West New Brighton, N. Y.

Interstate Engineering Co., Bedford, O.

Wellman-Seaver-Morgan Co., Cleveland, O.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Coal Handling Pockets—**

(See Pockets, Coal Handling.)

**Coal Holes—**

(See Iron Work, Builders.)

**Coal Hoppers on Scales—**

F. H. Evans, Brooklyn, N. Y.

Interstate Engineering Co., Bedford, O.

**Coal Lands—**

J. H. Hillman & Son, Pittsburgh, Pa.

**Coal Mining Machinery—**

Broderick & Bascom Rope Co., St. Louis.

Fawcett Machine Co., Pittsburgh, Pa.

Ingersoll-Rand Co., 11 Broadway, New York.

Jeffrey Mfg. Co., Columbus, O.

A. Leschen & Sons Rope Co., St. Louis.

Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Coal Storage Machinery—**

Link-Belt Co., Philadelphia, Pa.

Northern Engineering Works, Detroit, Mich.

**Coal Washing Machinery—**

Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Philadelphia, Pa.

**Coaling Stations, Locomotive—**

Brown Hoisting Machinery Co., Cleveland.

Browning Engineering Co., Cleveland, O.

C. W. Hunt Co., West New Brighton, N. Y.

Interstate Engineering Co., Bedford, O.

Link-Belt Co., Philadelphia, Pa.

Sheffield Car Co., Three Rivers, Mich.

Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Coat Hangers—**

(See Hangers, Garment and Trouser.)

**Coat Hooks—**

(See Hooks, Coat, Hat, &c.)

**Coat Hooks, Racks—**

(See Hooks, Racks.)

**Coating and Fillers, Wire Rope—**

Broderick & Bascom Rope Co., St. Louis.

A. Leschen & Sons Rope Co., St. Louis.

Arcade Mfg. Co., Freeport, Ill.

Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

Louis Sacks, Newark, N. J.

**Cobblers' Shoe Nails—**

(See Nails, Shoe, Cobblers', Channel, &c.)

**Cockeyes—**

(See Eyes, Cock.)

**Cocks, Brass—**

Ashton Valve Co., Boston, Mass.

Humphreys Mfg. Co., Mansfield, O.  
Landers, Frary & Clark, New Britain, Ct.  
Lunkenheimer Co., Cincinnati, O.  
National Tube Co., Pittsburgh, Pa.

Nolte Brass Co., Springfield, O.  
Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
Wm. Powell Co., Cincinnati, O.  
Walworth Mfg. Co., Boston, Mass.

**Cocks, Cylinder—**  
Hancock Inspirator Co., 85-89 Liberty St., New York.

**Cocks, Filter Press—**  
Lunkenheimer Co., Cincinnati, O.

**Cocks, Gas Engine—**  
Lunkenheimer Co., Cincinnati, O.

**Cocks, Gas Service—**  
Lunkenheimer Co., Cincinnati, O.

**Cocks, Gauge—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.

Ashcroft Mfg. Co., 85-89 Liberty St., N.Y.  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Jenkins Bros., 71 John St., New York.

Lunkenheimer Co., Cincinnati, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Ohio Brass Co., Mansfield, O.  
Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

Wm. Powell Co., Cincinnati, O.  
Walworth Mfg. Co., Boston, Mass.

**Cocks, Indicator—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.

**Cocks, Iron—**  
(See also Faucets, Iron.)

National Tube Co., Pittsburgh, Pa.  
Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

Walworth Mfg. Co., Boston, Mass.

**Cocks, Liquor—**  
Lunkenheimer Co., Cincinnati, O.

**Cocks, Oil—**  
Lunkenheimer Co., Cincinnati, O.

**Cocks, Packed Plug—**  
Lunkenheimer Co., Cincinnati, O.

**Cocks, Service—**  
National Tube Co., Pittsburgh, Pa.

**Cocks, Steam—**  
National Tube Co., Pittsburgh, Pa.

**Cocks, Stop and Waste—**  
E. M. Dart Mfg. Co., Providence, R. I.

Lunkenheimer Co., Cincinnati, O.

**Cocks, Throttle—**  
Lunkenheimer Co., Cincinnati, O.

**Coffee Machines—**  
(See Percolators, Coffee.)

**Coffee Mills, Pot Stands—**  
(See Mills, Stands.)

**Coffee Pots—**  
(See Pots, Tea and Coffee.)

**Coffee Sets—**  
(See Sets, Silver Plated.)

**Coffin Hardware—**  
Blake & Johnson Co., Waterbury, Ct.

**Coil Chain—**  
(See Chain, Coil.)

**Coilers, Chain Link—**  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Coilers, Wire—**  
Baird Machine Co., Oakville, Ct.

Garvin Machine Co., Spring and Varick Sts., New York.

E. J. Manville Machine Co., Waterbury, Ct.

Morgan Construction Co., Worcester, Mass.

**Coiling Machines, Spring—**  
(See Spring Coiling Machines.)

**Coils, Copper Steam—**  
E. B. Badger & Sons Co., Boston, Mass.

Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

Whitlock Coil Pipe Co., Hartford, Ct.

**Coils, Pipe—**  
Green Fuel Economizer Co., Matteawan, N. Y.

Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.

National Pipe Bending Co., New Haven, Ct.

National Tube Co., Pittsburgh, Pa.

Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

Walworth Mfg. Co., Boston, Mass.

Whitlock Coil Pipe Co., Hartford, Ct.

**Coiling Machinery—**  
Adriance Machine Works, Brooklyn, N. Y.

E. W. Bliss Co., Brooklyn, N. Y.

Consolidated Press & Tool Co., Hastings, Mich.

Ferracuta Machine Co., Bridgeton, N. J.

A. Garrison Foundry Co., Pittsburgh, Pa.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

Zeh & Hahnemann Co., Newark, N. J.

**Coins, Foreign—**  
Scovill Mfg. Co., Waterbury, Ct.

**Coke—**  
Bessemer Coke Co., Pittsburgh, Pa.

Columbus Iron & Steel Co., Columbus, O.

J. K. Dimmick & Co., 2023 New Land Title Bldg., Philadelphia, Pa.

Hickman, Williams & Co., Chicago, Ill.

J. H. Hillman & Son, Pittsburgh, Pa.

Jamison Coal & Coke Co., Pittsburgh, Pa.

La Belle Iron Works, Steubenville, O.

Standard Tin Plate Co., Canonsburg, Pa.

Tennessee Coal, Iron & Railroad Co., 71 Broadway, New York.

Washington Coal & Coke Co., Pittsburgh, Pa.

#### MERCHANTS.

Reed F. Blair & Co., Pittsburgh, Pa.

Bourne-Fuller Co., Cleveland, O.

C. B. Houston & Co., Girard Trust Bldg., Philadelphia, Pa.

Jerome Keeley & Co., 421 Chestnut St., Philadelphia, Pa.

Ernest Law & Co., 15th and Market Sts., Philadelphia, Pa.

J. J. Mohr, 131 S. 4th St., Philadelphia, Pa.

Edmund W. Mudge & Co., Pittsburgh, Pa.

Pilling & Crane, Girard Bldg., Philadelphia, Pa.

Potts & Wittman, North American Bldg., Philadelphia, Pa.

Rogers, Brown & Co., Cincinnati, O.

Frank Samuel, Harrison Bldg., Philadelphia, Pa.

W. P. Snyder & Co., Pittsburgh, Pa.

**Coke, Crushed—**  
MERCHANTS.

J. H. Hillman & Son, Pittsburgh, Pa.

C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.

J. J. Mohr, Bullitt Bldg., Philadelphia, Pa.

**Coke Forks—**  
(See Forks, Coke.)

**Coke Handling and Storage Machinery—**

Brown Hoisting Machinery Co., Cleveland.  
C. W. Hunt Co., West New Brighton, N. Y.

Interstate Engineering Co., Bedford, O.  
Link-Belt Co., Philadelphia, Pa.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**Coke Oven Machinery—**

John W. Seaver, Cleveland, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**Coke Pushers—**

John W. Seaver, Cleveland, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**Coke Quenchers—**

John W. Seaver, Cleveland, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**Cold Chisels—**

(See Chisels, Cold.)

**Cold Sheets—**

(See Sheets, Cold.)

**Cold Storage Machinery—**

Interstate Engineering Co., Bedford, O.

**Collar Screws—**

(See Screws, Collar.)

**Collars, Dog—**

(See Dog Furnishings.)

**Collars, Pole—**

Goodell-Pratt Co., Greenfield, Mass.

**Collars, Set—**

Poole Engineering & Machine Co., Baltimore, Md.

**Collars, Shafting—**

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. E. Caldwell Co., Inc., Louisville, Ky.  
Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Cumberland Steel Co., Cumberland, Md.  
Dodge Mfg. Co., Mishawaka, Ind.

Falls River & Machine Co., Cuyahoga Falls, O.

Jones & Laughlin Steel Co., Pittsburgh.  
W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Keystone Drop Forge Works, Chester, Pa.  
Link-Belt Co., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Rhode Island Tool Co., Providence, R. I.  
A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.

M. I. Smith, Bristol, Ct.  
W. & S. Mfg. Co., Worcester, Mass.

Wickes Bros., Saginaw, Mich.  
J. H. Williams & Co., Brooklyn, N. Y.

T. B. Wood's Sons Co., Chambersburg, Pa.

**Collars, Stove Pipe—**

Dover Stamping & Mfg. Co., Cambridge, Mass.

S. M. Howes Co., Boston, Mass.

**Collectors, Dust—**

American Blower Co., Detroit, Mich.  
Boston Blower Co., Hyde Park, Mass.

Buffalo Forge Co., Buffalo, N. Y.  
Knickerbocker Co., Jackson, Mich.

Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

B. F. Sturtevant Co., Hyde Park, Mass.

**Collectors for Lawn Mowers—**

(See Catchers, Grass, Lawn Mower.)

**Collectors, Grass—**

(See Catchers, Grass.)

**Collets, Draw Back—**

Hardinge Bros., 1036 Lincoln Ave., Chicago, Ill.

**Collets, Milling Machine—**

Brown & Sharpe Mfg. Co., Providence, R. I.

**Collets, Thrust—**

Hardinge Bros., 1036 Lincoln Ave., Chicago, Ill.

**Collets, Turret Tool Hold-**

Cleveland Twist Drill Co., Cleveland, O.

**Coloring, Straw Hat Fin-**

ish—  
Carpenter-Morton Co., Boston, Mass.

**Colors, Artists' Water—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Colors, Dry Paint—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

**Colors in Distemper—**

Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Colors in Japan—**

Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Colors in Oil—**

Hazard Lead Works, Inc., Hazardville, Ct.

Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Columns, Cast Iron Build-**

ing—  
American Bridge Co., of New York, 30 Church St., New York.

Baltimore Bridge Co., Baltimore, Md.  
Bethlehem Foundry & Machine Co., Bethlehem, Pa.

Carnegie Steel Co., Pittsburgh, Pa.  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.

W. N. Kratzer & Co., Pittsburgh, Pa.  
Phoenix Iron Co., 410 Walnut St., Philadelphia, Pa.

Stewart Iron Works, Cincinnati, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**MERCHANTS.**

Buell & Mitchell, 120 Liberty St., N. Y.

**Columns, Steam and Water**

**Gauge—**

Ashton Valve Co., Boston, Mass.  
Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.

National Tube Co., Pittsburgh, Pa.

**Columns, Steel—**

Interstate Engineering Co., Bedford, O.

**Columns, Veneer—**

(See Iron Work, Builders'.)  
**Combination Locks, Pliers—**

(See Locks, Pliers.)  
**Combination Vises—**

(See Vises, Drill and Anvil.)  
**Combs, Curry—**

Advance Mfg. Co., Racine, Wis.  
Arcade Mfg. Co., Freeport, Ill.

C. E. Jennings & Co., 42 Murray St., New York.

W. E. Kohler & Co., Canton, O.  
Morgan Spring Co., Worcester, Mass.

New York Stamping Co., Brooklyn, N. Y.

**Come-Along—**

(See Clamps, Come-Along.)  
**Commission Merchants.**

**Hardware—**

(See Agents, Hardware Manufacturers.)



**Communion Sets—**

(See Sets, Communion.)

**Commutator Bars and Segments—**

(See Bars and Segments, Commutator.)

**Commutators—**

(See Bars and Segments, Commutator.)

**Compasses, Dividers, &c.—**

Brown &amp; Sharpe Mfg. Co., Providence,

R. I.

Goodell-Pratt Co., Greenfield, Mass.

John H. Graham &amp; Co., 113 Chambers

St., New York.

Keuffel &amp; Esser Co., 127 Fulton St.,

New York.

Peck, Stow &amp; Wilcox Co., 27 Murray St.,

New York.

L. S. Starrett Co., Athol, Mass.

**Compasses, Marine—**

Keuffel &amp; Esser Co., 127 Fulton St.,

New York.

Riggs &amp; Bro., 310 Market St., Philadel-

phia, Pa.

**Compound, Brazing—**

(See Brazing Compound.)

**Compound, Graphite Pipe****Joint—**

Jos. Dixon Crucible Co., Jersey City, N. J.

Ohio Brass Co., Mansfield, O.

**Compound, Motor Chain—**

Joseph Dixon Crucible Co., Jersey City,

N. J.

**Compounds, Boiler—**

Dearborn Drug &amp; Chemical Works, Postal

Telegraph Bldg., Chicago, Ill.

Wm. B. Scaife &amp; Sons Co., Pittsburgh.

**Compounds, Commutators—**

Jos. Dixon Crucible Co., Jersey City, N. J.

**Compounds for Caulking****Pipe Joints—**

International Acheson Graphite Co., Ni-

agara Falls, N. Y.

Smooth-On Mfg. Co., Jersey City, N. J.

**Compounds, Iron—**

Smooth-On Mfg. Co., Jersey City, N. J.

**Compressed Air Motors—**

(See Motors, Compressed Air.)

**Compressed Air Tools—**

E. W. Bliss Co., Brooklyn, N. Y.

Chicago Pneumatic Tool Co., Fisher

Bldg., Chicago, Ill.

Clayton Air Compressor Works, 114-118

Liberty St., New York.

Helwig Mfg. Co., St. Paul, Minn.

Ingersoll-Rand Co., 11 Broadway, New

York.

Kilborn &amp; Bishop Co., New Haven, Ct.

Niles-Bement-Pond Co., 111 Broadway,

New York.

Pittsburgh Pneumatic Tool Co., Can-

ton, O.

Stow Flexible Shaft Co., 26th and Callow-

hill Sts., Philadelphia, Pa.

Sullivan Machinery Co., Railway Ex-

change Bldg., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

**MERCHANTS.**

Manning, Maxwell &amp; Moore, Inc., 85-89

Liberty St., New York.

Joseph T. Ryerson &amp; Son, 18-22 Milwaukee

Ave., Chicago, Ill.

Scully Steel &amp; Iron Co., Halsted and

Wayman Sts., Chicago, Ill.

**Compressing Machinery.****Coal—**

Wellman-Seaver-Morgan Co., Cleveland, O.

**Compressing Machinery.****Cotton—**

Bethlehem Steel Co., 80, Bethlehem, Pa.

**Compression Pumps—**

(See Pumps, Compression and Vacuum.)

**Compressors, Air—**

American Well Works, Aurora, Ill.

Barnes Mfg. Co., Mansfield, O.

Blaisdell Machinery Co., Bradford, Pa.

E. W. Bliss Co., Brooklyn, N. Y.

Builders Iron Foundry, Providence, R. I.

Bury Compressor Co., Erie, Pa.

Chicago Pneumatic Tool Co., Fisher

Bldg., Chicago, Ill.

Clark Novelty Co., Rochester, N. Y.

Clayton Air Compressor Works, 114-118

Liberty St., New York.

Dean Bros. Steam Pump Works, Indian-

apolis, Ind.

Deming Co., Salem, O.

Eynon-Evans Mfg. Co., 1507 Clearfield St.,

Philadelphia, Pa.

Foos Gas Engine Co., Springfield, O.

General Electric Co., Schenectady, N. Y.

Ingersoll-Rand Co., 11 Broadway, New

York.

John H. McGowan Co., Cincinnati, O.

Mackintosh, Hemphill &amp; Co., Pittsburgh,

Pa.

Mesta Machine Co., Pittsburgh, Pa.

F. E. Myers &amp; Bro., Ashland, O.

National Brake &amp; Electric Co., Milwau-

kee, Wis.

Niles-Bement-Pond Co., 111 Broadway,

New York.

Norwalk Iron Works Co., South Norwalk,

Ct.

Riverside Engine Co., Oil City, Pa.

F. W. Spacke Machine Co., Indianapolis,

Ind.

Sullivan Machinery Co., Railway Ex-

change Bldg., Chicago, Ill.

Union Steam Pump Co., Battle Creek,

Mich.

Robt. Wetherill &amp; Co., Chester, Pa.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.

W. R. Beatty Machinery &amp; Equipment

Co., Pittsburgh, Pa.

Charles Behlen, 72 Trinity Place, N. Y.

Thomas P. Conard &amp; Co., 119 S. 4th St.,

Philadelphia, Pa.

Barclay M. Everson, Pittsburgh, Pa.

W. C. Johnson &amp; Sons Machinery Co.,

St. Louis, Mo.

McDowell &amp; Co., Allegheny, Pa.

Manning, Maxwell &amp; Moore, Inc., 85 Lib-

erty St., New York.

Edgar M. Moore &amp; Co., Pittsburgh, Pa.

Wm. S. Nicholls, 253 Broadway, N. Y.

S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., 1021 N. Delaware Ave.,

Philadelphia, Pa.

Pfannmueller Engineering Co., First Na-

tional Bank Bldg., Chicago, Ill.

Joseph T. Ryerson &amp; Son, 18-22 Milwaukee

Ave., Chicago, Ill.

Scully Steel &amp; Iron Co., Halsted and

Wayman Sts., Chicago, Ill.

L. F. Seyfert's Sons, Inc., 437-441 N. 3d

St., Philadelphia, Pa.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

**Compressors, Air, Portable—**

Foss Gas Engine Co., Springfield, O.  
National Brake & Electric Co., Milwaukee, Wis.

**Compressors, Gas—**

American Well Works, Aurora, Ill.  
Blaisdell Machinery Co., Bradford, Pa.  
Bury Compressor Co., Erie, Pa.  
Clayton Air Compressor Works, 114-118 Liberty St., New York.  
Ingersoll-Rand Co., 11 Broadway, New York.

Norwalk Iron Works Co., South Norwalk, Ct.

Riverside Engine Co., Oil City, Pa.  
F. W. Spacke Machine Co., Indianapolis, Ind.

Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

Union Steam Pump Co., Battle Creek, Mich.

**Computing Machines—**

(See Adding, Computing and Reckoning Machines.)

**Concrete Construction—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Baltimore Bridge Co., Baltimore, Md.  
Buell & Mitchell, 120 Liberty St., N. Y.

**Concrete Reinforcing Material—**

(See Reinforcing Fabrics for Concrete.)

**Condensers, Ammonia—**

Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.

Whitlock Coil Pipe Co., Hartford, Ct.

**Condensers, Oil—**

Petroleum Iron Works Co., Sharon, Pa.

**Condensers, Steam—**

Alberger Condenser Co., 95 Liberty St., New York.

Buffalo Foundry & Machine Co., Buffalo, N. Y.

Dean Bros. Steam Pump Works, Indianapolis, Ind.

Eynon-Evans Mfg. Co., 1507 Clearfield St., Philadelphia, Pa.

Benj. F. Kelley & Son, 91 Liberty St., New York.

John H. McGowan Co., Cincinnati, O.

Mesta Machine Co., Pittsburgh, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Southwark Foundry & Machine Co., Philadelphia, Pa.

Tudor Boiler Mfg. Co., Cincinnati, O.

Union Steam Pump Co., Battle Creek, Mich.

Whitlock Coil Pipe Co., Hartford, Ct.

H. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Conductor Elbows, Fasteners, &c.—**

(See Elbows, Fasteners, &c.)

**Conductor Pipe Hangers—**

(See Hangers, Pipe.)

**Conductors, Pipe, &c.—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

Delphos Mfg. Co., Delphos, O.

Thomas Steel Co., Niles, O.

Waite, Ranlet & Co., Boston, Mass.

**Conductor Pipe Stock—**

(See Sheets, Metal, Eave Trough and Conductor Stock.)

**Cones and Cups—**

(See Cups and Cones.)

**Confectioners' Hatchets—**

(See Hatchets, Confectioners'.)

**Connecting Rods, Forged Steel—**

Carnegie Steel Co., Pittsburgh, Pa.

M. Lanz & Sons, Pittsburgh, Pa.

Pennsylvania Forge Co., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.

**Connectors, Linemen's—**

(See Splicers, Wire.)

**Contact Points, Platinum—**

(See Points, Contact, Platinum.)

**Contractors' Cars—**

(See Cars, Dump.)

**Contractors' Carts—**

(See Carts, Dump.)

**Controllers, Electric—**

Case Crane Co., Columbus, O.

Crocker-Wheeler Co., Ampere, N. J.

Electric Controller & Mfg. Co., Cleveland, O.

General Electric Co., Schenectady, N. Y.

Morgan Engineering Co., Alliance, O.

Northern Engineering Works, Detroit, Mich.

Warner Elevator Mfg. Co., Cincinnati, O.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Controllers, Electric, for Conveying Machinery—**

Electric Controller & Mfg. Co., Cleveland, O.

**Controllers, Electric, for Cranes—**

Case Crane Co., Columbus, O.

Crocker-Wheeler Co., Ampere, N. J.

General Electric Co., Schenectady, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.

Northern Engineering Works, Detroit, Mich.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Controllers, Motor—**

Electric Controller & Mfg. Co., Cleveland, O.

**Controllers, Motor, for Cranes—**

Electric Controller & Mfg. Co., Cleveland, O.

**Controllers, Motor, for Pumps—**

Electric Controller & Mfg. Co., Cleveland, O.

**Converters, Bessemer—**

Northern Engineering Works, Detroit, Mich.

J. W. Paxson Co., 1021 Delaware Ave., Philadelphia, Pa.

Pennsylvania Engineering Works, New Castle, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Tropenas Steel Co., New Castle, Del.

**Converters, Electric—**  
General Electric Co., Schenectady, N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Conveying Belts—**  
(See Belts, Conveying.)

**Conveying Machinery—**  
Atlas Car & Mfg. Co., Cleveland, O.  
Broderick & Bascom Rope Co., St. Louis.  
Brown Hoisting Machinery Co., Cleveland.  
Browning Engineering Co., Cleveland, O.  
H. W. Caldwell & Son Co., Western Ave.  
and 17th St., Chicago, Ill.  
W. E. Caldwell Co., Louisville, Ky.  
W. J. Clark Co., Salem, O.  
Cleveland Punch & Shear Works Co.,  
Cleveland, O.  
Dodge Mfg. Co., Mishawaka, Ind.  
Gifford-Wood Co., Hudson, N. Y.  
C. W. Hunt Co., West New Brighton,  
N. Y.

Interstate Engineering Co., Bedford, O.  
Jeffrey Mfg. Co., Columbus, O.

W. A. Jones Foundry & Machine Co.,  
142-164 W. North Ave., Chicago, Ill.

A. Leschen & Sons Rope Co., St. Louis.  
Lidgerwood Mfg. Co., 96 Liberty St., N.Y.

Link-Belt Co., Philadelphia, Pa.  
Morgan Construction Co., Worcester,  
Mass.

F. E. Myers & Bro., Ashland, O.  
Northern Engineering Works, Detroit,  
Mich.

Otis Elevator Co., Railway Exchange,  
Chicago, Ill.

Riter-Conley Mfg. Co., Pittsburgh, Pa.  
Robins Conveying Belt Co., 17-22 Park  
Row, New York.

A. L. Schultz & Son, 570-572 Elston Ave.,  
Chicago, Ill.

Shannon Engineering & Contracting Co.,  
Pittsburgh, Pa.

Taylor Iron & Steel Co., High Bridge,  
N. J.

Van Dorn Iron Works Co., Cleveland, O.  
Webster Mfg. Co., 1075-1111 W. 15th St.,  
Chicago, Ill.

Wellman-Seaver-Morgan Co., Cleveland, O.  
Whiting Foundry Equipment Co., Har-  
vey, Ill.

Wickes Bros., Saginaw, Mich.  
Woodward, Wight & Co., Ltd., New  
Orleans, La.

#### MERCHANTS.

Carlin Machinery & Supply Co., Inc.,  
N. S. Pittsburgh, Pa.

Main Belting Co., 1219 Carpenter St.,  
Philadelphia, Pa.

C. C. Wormer Machinery Co., Detroit,  
Mich.

**Conveying Machinery, Elec-  
tric—**

Brown Hoisting Machinery Co., Cleveland.  
Interstate Engineering Co., Bedford, O.

Morgan Construction Co., Worcester,  
Mass.

Wellman-Seaver-Morgan Co., Cleveland, O.  
Whiting Foundry Equipment Co., Har-  
vey, Ill.

**Conveying Machinery, Ice—**

H. W. Caldwell & Son Co., 17th St. and  
Western Ave., Chicago, Ill.

Gifford-Wood Co., Hudson, N. Y.  
Interstate Engineering Co., Bedford, O.

**Conveying Machinery  
Parts—**

Taylor Iron & Steel Co., High Bridge,  
N. J.

Webster Mfg. Co., 1075 W. 15th St., Chi-  
cago, Ill.

**Conveyor Belts: Concentrat-  
ing Rollers for—**

H. W. Caldwell & Son Co., Western Ave.  
and 17th St., Chicago, Ill.

Link-Belt Co., Philadelphia, Pa.

**Conveyor Pans, Troughs—**  
(See Pans, Troughs.)

**Conveyors, Brick—**  
Jeffrey Mfg. Co., Columbus, O.

**Conveyors, Cable Hoist—**  
Broderick & Bascom Rope Co., St. Louis,  
Mo.

**Conveyors, Cotton and  
Wool—**

Boston Blower Co., Hyde Park, Mass.  
B. F. Sturtevant Co., Boston, Mass.

Webster Mfg. Co., 1075-1111 W. 15th St.,  
Chicago, Ill.

**Conveyors, Light Material—**  
Boston Blower Co., Hyde Park, Mass.

Interstate Engineering Co., Bedford, O.  
F. E. Myers & Bros., Ashland, O.

B. F. Sturtevant Co., Boston, Mass.  
Webster Mfg. Co., 1075-1111 W. 15th St.,  
Chicago, Ill.

**Conveyors, Rolling Mill—**  
Morgan Construction Co., Worcester, Mass.

**Conveyors, Steel Screw—**  
H. W. Caldwell & Son Co., Western Ave.

and 17th St., Chicago, Ill.  
Interstate Engineering Co., Bedford, O.

Irwin Auger Bit Co., Wilmington, O.  
Link-Belt Co., Philadelphia, Pa.

Webster Mfg. Co., 1075-1111 W. 15th St.,  
Chicago, Ill.

**Conveyors, Sugar—**  
American Tool & Machine Co., Boston,  
Mass.

**Cookers, Fireless—**  
American Woodenware Mfg. Co., To-  
ledo, O.

**Cookers, Steam—**  
Gem Mfg. Co., Boston, Mass.

**Cooking Outfits, Electric—**  
General Electric Co., Schenectady, N. Y.

**Coolers, Bread and Cake—**  
Kilbourne Mfg. Co., Troy, N. Y.

Wire Goods Co., Worcester, Mass.

**Coolers, Cellular, for Auto-  
mobiles—**

Whitlock Coil Pipe Co., Hartford, Ct.

**Coolers, Water—**  
Consumers' Cooler Co., 35th and Butler  
Sts., Chicago, Ill.

**Cooling Towers—**  
Alberger Condenser Co., 96 Liberty St.,  
New York.

Southwark Foundry & Machine Co.,  
Philadelphia, Pa.

**Coops, Poultry—**  
Fred J. Meyers Mfg. Co., Hamilton, O.

**Coping Machines, Beam and  
Channel—**

Hilles & Jones Co., Wilmington, Del.  
Long & Allstatter Co., Hamilton, O.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

**Coping Saws—**

(See Saws, Coping.)

**Copper—**

American Metal Co., 52 Broadway, N. Y.  
Theo. Hiertz Metal Co., St. Louis, Mo.  
Pittsburgh White Metal Co., Pittsburgh.

**MERCHANTS.**

American Metal Co., 52 Broadway, N. Y.  
Bridgeport Brass Co., 253 B'way, N. Y.  
Follansbee Bros. Co., Pittsburgh, Pa.  
Arthur C. Harvey Co., Boston, Mass.  
Hendricks Bros., 49 Cliff St., New York.  
C. W. Leavitt & Co., 30 Church St., N. Y.  
Homer F. Livermore, Boston, Mass.  
Merchant & Evans Co., Philadelphia, Pa.  
Scully Steel & Iron Co., 69 No. Halsted St., Chicago, Ill.  
Waite, Ranlet & Co., Boston, Mass.

**Copper Bars—**

Bridgeport Brass Co., 253 B'way, N. Y.  
Seymour Mfg. Co., Seymour, Ct.

**Copper, Bolt—**

Bridgeport Brass Co., 253 B'way, N. Y.  
Hendricks Bros., 49 Cliff St., New York.  
Merchant & Evans Co., Philadelphia, Pa.  
Seymour Mfg. Co., Seymour, Ct.

**Copper Floats—**

Bancroft & Co., Philadelphia, Pa.

**Copper, Manganese—**

Crescent Phosphorized Metal Co., Philadelphia, Pa.

**Copper, Pails—**

(See Ware Brass and Copper.)

**Copper, Perforated Sheet—**

Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.  
Hendrick Mfg. Co., Carbondale, Pa.  
Manhattan Perforated Metal Co., 237 Centre St., New York.  
Chas. Mundt & Sons, 441 Pearl St., N. Y.

**Copper, Phosphor—**

Crescent Phosphorized Metal Co., Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.  
Roessler & Hasslacher Chemical Co., 100 William St., New York.

**Copper, Roll and Sheet—**

Bridgeport Brass Co., 253 B'way, N. Y.  
Hendricks Bros., 49 Cliff St., New York.  
Arthur T. Rutter & Co., 256 Broadway, New York.

Scovill Mfg. Co., Waterbury, Ct.  
Seymour Mfg. Co., Seymour, Ct.  
Waite, Ranlet & Co., Boston, Mass.

**Copper, Sheet—**

(See Copper, Roll and Sheet.)

**Copper Sheets, Platinum Plated—**

Ellwood Ivins Tube Works, Oak Lane Sta., Philadelphia, Pa.

**Copper Shot, Purified—**

Riverside Metal Co., Riverside, N. J.

**Copper, Spinning—**

Bancroft & Co., Philadelphia, Pa.

**Copper, Sulphate—**

Sandoval Zinc Co., 122 No. Peoria St., Chicago, Ill.

**Copper Wire, Bare and Waterproof—**

(See Wires, Electrical.)

**Coppering—**

E. Phillips & Sons, So. Hanover, Mass.

**Coppers, Soldering—**

E. W. Bliss Co., Brooklyn, N. Y.  
Bridgeport Brass Co., 253 Broadway, N. Y.  
Ferracute Machine Co., Bridgeton, N. J.  
C. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.  
Millers Falls Co., 28 Warren St., N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Copperamiths—**

E. B. Badger & Sons Co., Boston, Mass.  
J. B. Chapman & Co., Springfield, Mass.  
Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
National Pipe Bending Co., New Haven, Ct.

**Cord Adjusters, Electric—**

(See Electric Light Fittings.)

**Cord, Arc Light—**

Samson Cordage Works, Boston, Mass.  
Silver Lake Co., Boston, Mass.

**Cord, Bell—**

(See Cord, Signal.)

**Cord, Bicycle Lacing—**

Turner & Stanton Co., Norwich, Ct.

**Cord, Electric—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Silver Lake Co., Boston, Mass.

**Cord Grips—**

(See Grips, Cord and Line.)

**Cord, Picture—**

Andrew B. Hendryx Co., New Haven, Ct.  
Parker Wire Goods Co., Worcester, Mass.

**Cord, Sash—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Broderick & Bascom Rope Co., St. Louis.  
Estes Mills, Fall River, Mass.  
John H. Graham & Co., 113 Chambers St., New York.

A. Leschen & Sons Rope Co., St. Louis.  
Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
Samson Cordage Works, Boston, Mass.  
Silver Lake Co., Boston, Mass.  
Williamsport Wire Rope Co., Williamsport, Pa.

**Cord, Shade and Ventilator—**

Samson Cordage Works, Boston, Mass.  
Silver Lake Co., Boston, Mass.  
Turner & Stanton Co., Norwich, Ct.

**Cord, Signal—**

Broderick & Bascom Rope Co., St. Louis.  
A. Leschen & Sons Rope Co., St. Louis.  
Samson Cordage Works, Boston, Mass.  
Silver Lake Co., Boston, Mass.

**Cord, Trolley—**

Samson Cordage Works, Boston, Mass.  
Silver Lake Co., Boston, Mass.

**Cord, Wire, Picture—**

Broderick & Bascom Rope Co., St. Louis.  
Andrew B. Hendryx Co., New Haven, Ct.  
A. Leschen & Sons Rope Co., St. Louis.  
Turner & Stanton Co., Norwich, Ct.  
Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.

**Cord, Wire, Sash—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Phosphor-Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.  
Wright Wire Co., Palmer, Mass.

**Cordage—**

American Mfg. Co., 63 Wall St., N. Y.  
 Broderick & Bascom Rope Co., St. Louis,  
 New York Cordage Co., 80 Wall St., New  
 York

A. Leichen & Sons Rope Co., St. Louis,  
 Plymouth Cordage Co., Norta Plymouth,  
 Mass.

Samson Cordage Works, Boston, Mass.

**Cordage, Braided—**

(See Cordage.)

**Cords, Hammock—**

(See Ropes, Hammock and Hitching.)

**Core Chaplets—**

J. W. Paxson Co., 1021 N. Delaware Ave.,  
 Philadelphia, Pa.

**Core Machines, Foundry—**

Falls Rivet & Machine Co., Cuyahoga  
 Falls, O.

Fox Machine Co., Grand Rapids, Mich.

**Core Making Compound—**

S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., 1021 N. Delaware Ave.,  
 Philadelphia, Pa.

Smooth-On Mfg. Co., Jersey City, N. J.

**Core Oil—**

(See Oil, Core.)

**Corers, Apple—**

Dover Stamping & Mfg. Co., Cambridge,  
 Mass.

Kilbourne Mfg. Co., Troy, N. Y.

Landers, Frary & Clark, New Britain, Ct.

Parker Wire Goods Co., Worcester, Mass.

Rollman Mfg. Co., Mt. Joy, Pa.

**Corers, Platers—**

Seymour Mfg. Co., Seymour, Ct.

**Cork Cutters—**

(See Cutters, &c.)

**Cork Screws—**

(See Screws, Cork.)

**Corn Cutters, Graters, &c.—**

(See Cutters, Graters, &c.)

**Corn Knife Handles—**

(See Handles, Grass Hook, &c.)

**Corn Shellers—**

S. Freeman & Sons Mfg. Co., Racine, Wis.

Humphrey & Sons, Joliet, Ill.

Parker Wire Goods Co., Worcester, Mass.

**Corner Irons—**

(See Irons, Corner.)

**Corners, Box—**

Acme Steel Goods Co., 2334-2340 Archer  
 St., Chicago, Ill.

Cary Mfg. Co., 19-21 Roosevelt St., N. Y.

**Corners, Box and Case—**

Eagle Lock Co., Terryville, Ct.

R. C. Jenkinson & Co., Newark, N. J.

John R. Keim Mills, Inc., Buffalo, N. Y.

**Corners, Trunk—**

R. C. Jenkinson & Co., Newark, N. J.

John R. Keim Mills, Inc., Buffalo, N. Y.

J. H. Sessions & Son, Bristol, Ct.

**Corners, Window Screen—**

Columbia Grey Iron Co., Columbia, Pa.

**Cornice, &c., Sheet Metal—**

Boston Pressed Metal Co., Worcester,  
 Mass.

Chattanooga Roofing & Foundry Co.,  
 Chattanooga, Tenn.

Indestructible Metal Co., 50 Church  
 St., New York.

McCance Bros. Co., Inc., Pittsburgh, Pa.

**Cornice Machinery—**

Armstrong-Blum Mfg. Co., 109 N. Fran-  
 cisco Ave., Chicago, Ill.

Badger State Machine Co., Janesville,  
 Wis.

George A. Ohl & Co., Newark, N. J.

**Corrugated Arches—**

(See Arches, Curved, Corrugated.)

**Corrugated Gaskets—**

(See Gaskets, Corrugated.)

**Corrugated Iron—**

American Sheet and Tin Plate Co., Pitts-  
 burgh, Pa.

American Tube & Stamping Co., Bridge-  
 port, Ct.

Baltimore Bridge Co., Baltimore, Md.

Boston Bridge Works, Boston, Mass.

Brown Hoisting Machinery Co., Cleveland,  
 Chattanooga Roofing & Foundry Co.,  
 Chattanooga, Tenn.

Empire Iron & Steel Co., Niles, O.

Inland Steel Co., First National Bank  
 Bldg., Chicago, Ill.

McCullough Iron Co., Wilmington, Del.

Newport Rolling Mill Co., Newport, Ky.

Thomas Steel Co., Niles, O.

Alan Wood Iron & Steel Co., 519 Arch  
 St., Philadelphia, Pa.

Youngstown Iron & Steel Roofing Co.,  
 Youngstown, O.

Youngstown Sheet & Tube Co., Youngs-  
 town, O.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.

Buel & Mitchell, 120 Liberty St., N. Y.

Arthur C. Harrey Co., Boston, Mass.

C. B. Houston & Co., Girard Bldg., Phil-  
 adelphia, Pa.

Merchant & Evans Co., Philadelphia, Pa.

Piercion & Co., 29 Broadway, New York.

Horace T. Potts & Co., 316-320 N. 3d St.,  
 Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Millwau-  
 kee Ave., Chicago, Ill.

Wm. B. Scaife & Sons, Pittsburgh, Pa.

Scully Steel & Iron Co., Halsted and  
 Wayman Sts., Chicago, Ill.

**Corrugated Nails—**

(See Nails, Corrugated.)

**Corrugated Sheets, As-  
bestos Covered—**

(See Asbestos Coated Steel Sheets.)

**Corrugated Steel Fasten-  
ers—**

(See Fasteners, Corrugated Steel.)

**Corrugating Machinery,  
Sheet—**

(See Sheet Corrugating Machinery.)

**Corset Machinery—**

Baird Machine Co., Oakville, Ct.

A. H. Nilson Machine Co., Bridgeport, Ct.

**Corset Steel—**

(See Steel, Corset.)

**Corundum—**

American Emery Wheel Works, Provi-  
 dence, R. I.

Hamilton Emery & Corundum Co.,  
 Chester, Mass.

Keystone Emery Mills, Frankford, Pa.

Norton Co., Worcester, Mass.

Pike Mfg. Co., Pike, N. H.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

Vitrified Wheel Co., Westfield, Mass.

**Corundum Bricks—**

American Emery Wheel Works, Providence, R. I.

**Cots, Tent—**

Enterprise Bed Co., Hammond, Ind.

**Cottages, Portable—**

(See Houses, Portable.)

**Cotter Drills—**

(See Drills, Cotter.)

**Cotter Pin Machinery—**

Blake & Johnson Co., Waterbury, Ct.

F. B. Shuster Co., New Haven, Ct.

**Cotter Wire—**

(See Wire, Cotter.)

**Cotters and Keys, Spring—**

Blake & Johnson Co., Waterbury, Ct.

Cobb & Drew, Inc., Plymouth, Mass.

Hindley Mfg. Co., Valley Falls, R. I.

E. Jenckes Mfg. Co., Pawtucket, R. I.

F. P. Smith & Co., Sharon Hill, Pa.

Whitman & Barnes Mfg. Co., Chicago, Wis.

Wm. Goods Co., Worcester, Mass.

**Cotters, Cellar Box, Spring—**

(See Cotters and Keys, Spring.)

**Cotton and Woolen Manufacturers' Tools—**

Brown & Sharpe Mfg. Co., Providence, R. I.

**Cotton Dryers—**

(See Dryers, Cloth and Cotton.)

**Cotton Planters—**

(See Planters, Cotton.)

**Counter Borers, Scales, Supports—**

(See Borers, Scales, Supports.)

**Counters, Revolution—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.

Ashton Valve Co., Boston, Mass.

Crosby Steam Gauge & Valve Co., Boston, W. N.

Durant Co., Milwaukee, Wis.

Uehling Instrument Co., Passaic, N. J.

Veeder Mfg. Co., Hartford, Ct.

**Counters, Shoe—**

Graton & Knight Mfg. Co., Worcester, Mass.

**Counters, Speed—**

(See Speed Counters.)

**Counters, Store—**

J. D. Warren Mfg. Co., Chicago, Ill.

**Counters, Wrapping—**

J. D. Warren Mfg. Co., Chicago, Ill.

**Countershafts—**

American Blower Co., Detroit, Mich.

Baird Machine Co., Oakville, Ct.

Brown & Sharpe Mfg. Co., Providence, R. I.

Buffalo Forge Co., Buffalo, N. Y.

Builders Iron Foundry, Providence, R. I.

Crescent Machine Co., Leetonia, O.

Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.

Deming Co., Salem, O.

Diamond Machine Co., Providence, R. I.

Dodge Mfg. Co., Mishawaka, Ind.

W. & B. Douglas, Middletown, Ct.

Falls River & Machine Co., Cuyahoga Falls, O.

Garvin Machine Co., Spring & Varick Sts., New York.

Gem Mfg. Co., Pittsburgh, Pa.

Goodell-Pratt Co., Greenfield, Mass.

Humphreys Mfg. Co., Mansfield, O.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Mast, Foon & Co., Springfield, O.

Mossberg Wrench Co., Central Falls, R. I.

F. E. Myers & Bro., Ashland, O.

Pratt & Whitney Co., Hartford, Ct.

Royersford Foundry & Machine Co., Royersford, Pa.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

Variable Speed Clutch Co., Milwaukee, Wis.

Wells Bros. Co., Greenfield, Mass.

Wiley & Russell Mfg. Co., Greenfield, Mass.

Zucker & Levett & Loeb Co., 525-530 W. 25th St., New York.

**MERCHANTS.**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

**Countershafts, Friction—**

Garvin Machine Co., Spring & Varick Sts., New York.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**Countershafts, Right Angle—**

T. R. Almond Mfg. Co., Ashburnham, Mass.

**Countershafts, Variable Speed—**

Variable Speed Clutch Co., Milwaukee, Wis.

**Countersink Bits—**

(See Bits, Countersink.)

**Countersink Radial Machines—**

Detrick & Harvey Machine Co., Baltimore, Md.

Niles-Bement-Pond Co., 111 Broadway, New York.

**Countersinks—**

Billings & Spencer Co., Hartford, Ct.

Buck Bros., Millbury, Mass.

Butterfield & Co., Derby Line, Vt.

Cleveland Twist Drill Co., Cleveland, O.

Elmore Tool Mfg. Co., Hartford, Ct.

Irwin Auger Bit Co., Wilmington, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

H. H. Mayhew Co., Shelburne Falls, Mass.

Morse Twist Drill & Mach. Co., New Bedford, Mass.

Pratt & Whitney Co., Hartford, Ct.

Job T. Pugh, 31st and Ludlow Sts., Philadelphia, Pa.

E. F. Reece Co., Greenfield, Mass.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Otis A. Smith, Rockfall, Ct.

Standard Tool Co., Cleveland, O.

Stanley Rule & Level Co., New Britain, Ct.

L. S. Starrett Co., Athol, Mass.

James Swan Co., Seymour, Ct.

Tuck Mfg. Co., Brockton, Mass.

Wells Bros. & Co., Greenfield, Mass.

Whitman & Barnes Mfg. Co., Chicago, Ill.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**Countersunk Head Nails—**

(See Nails, Countersunk Head.)

**Counting Machines—**

W. N. Durant Co., Milwaukee, Wis.  
 Grant Mfg. & Machine Co., Bridgeport, Ct.  
 C. J. Root Co., Bristol, Ct.  
 Veeder Mfg. Co., Hartford, Ct.

**Couplers, Automatic Car—**

Ohio Brass Co., Mansfield, O.

**Couplers, Car—**

American Steel Foundries, 42 Broadway, New York.

National Tube Co., Pittsburgh, Pa.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Coupling Bolts—**

(See Bolts, Special.)

**Couplings, Bell Cord—**

American Railway Supply Co., 24 Park Place, New York.

Samson Cordage Works, Boston, Mass.

Silver Lake Co., Boston, Mass.

**Couplings, Cable, Flexible—**

Electric Controller & Mfg. Co., Cleveland, O.

**Couplings, Carriage Shaft and Pole—**

C. C. Bradley & Son, Syracuse, N. Y.

Fernald Mfg. Co., North East, Pa.

Scranton Forging Co., Scranton, Pa.

**Couplings, Compression Shaft—**

H. W. Caldwell & Son Co., Western Ave. & 17th St., Chicago, Ill.

W. E. Caldwell Co., Louisville, Ky.

Charter Gas Engine Co., Sterling, Ill.

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Dodge Mfg. Co., Mishawaka, Ind.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

W. H. Nicholson & Co., Wilkes-Barre, Pa.

Poole Engineering & Machine Co., Baltimore, Md.

T. B. Wood's Sons Co., Chambersburg, Pa.

**Couplings, Drill Rod—**

National Tube Co., Pittsburgh, Pa.

**Couplings, Flanged Pipe—**

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

Jefferson Union Co., Lexington, Mass.

**Couplings, Flange Shaft—**

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. E. Caldwell Co., Louisville, Ky.

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Cumberland Steel Co., Cumberland, Md.

W. P. Davis Machine Co., Rochester, N. Y.

Dodge Mfg. Co., Mishawaka, Ind.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Hess-Snyder Co., Massillon, O.

Jefferson Union Co., Lexington, Mass.

Jones & Laughlin Steel Co., Pittsburgh.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Link-Belt Co., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Poole Engineering & Machine Co., Baltimore, Md.

Upson Nut Co., Cleveland, O.

Walworth Mfg. Co., Boston, Mass.

T. B. Wood's Sons Co., Chambersburg, Pa.

**Couplings, Flexible—**

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

**Couplings, Friction Clutch—**

Adriance Machine Works, Brooklyn, N. Y.

American Tool & Machine Co., Boston.

American Well Works, Aurora, Ill.

E. W. Bliss Co., Brooklyn, N. Y.

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. E. Caldwell Co., Louisville, Ky.

Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.

Dodge Mfg. Co., Mishawaka, Ind.

Eastern Machinery Co., New Haven, Ct.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Hess-Snyder Co., Massillon, O.

Carlyle Johnson Machine Co., Hartford, Ct.

Jones & Laughlin Steel Co., Pittsburgh.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Link-Belt Co., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

New Haven Mfg. Co., New Haven, Ct.

Poole Engineering & Machine Co., Baltimore, Md.

Standard Clutch Mfg. Co., Sidney, O.

T. B. Wood's Sons Co., Chambersburg, Pa.

**Couplings, Hose—**

(See Hose Attachments.)

**Couplings, Joint—**

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

Gould & Eberhardt, Newark, N. J.

**Couplings, Mine Car—**

Wm. Harris & Son, Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Standard Chain Co., Pittsburgh, Pa.

**Couplings, Pipe—**

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

Bard Union Co., Norwich, Ct.

A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.

Jefferson Union Co., Lexington, Mass.

National Tube Co., Pittsburgh, Pa.

**Couplings, Pump Rod—**

American Well Works, Aurora, Ill.

Barnes Mfg. Co., Mansfield, O.

A. D. Cook, Lawrenceburg, Ind.

Goulds Mfg. Co., Seneca Falls, N. Y.

Keystone Driller Co., Beaver Falls, Pa.

Mast, Foos & Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

National Tube Co., Pittsburgh, Pa.

**Couplings, Quarter Turn Shaft—**

T. R. Almond Mfg. Co., Ashburnham, Mass.

Coates Clipper Mfg. Co., Worcester, Mass.

**Couplings, Spiral Shaft—**

H. W. Caldwell & Son Co., Western Ave. & 17th St., Chicago, Ill.

**Couplings, Universal Joint—**

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.  
W. E. Caldwell Co., Inc., Louisville, Ky.  
Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.  
Dodge Mfg. Co., Mishawaka, Ind.  
Jones & Laughlin Steel Co., Pittsburgh, Pa.  
W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.  
Stow Flexible Shaft Co., 28th and Callowhill Sts., Philadelphia, Pa.  
T. B. Wood's Sons Co., Chambersburg, Pa.

**Couplings, Wire Rope—**

Broderick & Bascom Rope Co., St. Louis, Mo.  
A. Leschen & Sons Rope Co., St. Louis, Mo.

**Covering, Pulley, Leather—**

Graton & Knight Mfg. Co., Worcester, Mass.

**Covers and Caps, Crucible—**

Joseph Dixon Crucible Co., Jersey City, N. J.  
McCullough-Da'zell Crucible Co., Pittsburgh, Pa.

**Covers, Barrel and Box—**

Andrews Wire & Iron Works, Rockford, Ill.

Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Fred J. Meyers Mfg. Co., Hamilton, O.

**Covers, Catch Basin—**

Vulcan Iron Works, 28 No. Irving Ave., Chicago, Ill.

**Covers, Cistern—**

(See Iron Work, Builders.)

**Covers, Dish—**

(See Household Articles, Wire.)

**Covers, Horse Fly—**

I. E. Palmer Co., Middletown, Ct.

**Covers, Manhole Cistern—**

(See Iron Work, Builders.)

**Covers, Piano, Canvas—**

Sycamore Wagon Works, Sycamore, Ill.

**Covers, Pot—**

Avery Stamping Co., Cleveland, O.  
Leshner Mfg. Co., Davenport, Ia.

**Cow Bells—**

(See Bells, Cow.)

**Crabs—**

(See Winches.)

**Crabs, Pole—**

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

**Crackers, Nut—**

American Cutlery Co., Chicago, Ill.  
Arcade Mfg. Co., Freeport, Ill.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Caldwell Mfg. Co., Rochester, N. Y.  
Columbia Grey Iron Co., Columbia, Pa.

International Silver Co., Meriden, Ct.  
Landers, Frary & Clark, New Britain, Ct.

Reading Hardware Co., Reading, Pa.

**Cradles, Grain—**

American Fork & Hoe Co., Cleveland, O.

**Crane Chain—**

(See Chain, Crane, Cable, &c.)

**Crane Runways—**

(See Track, Overhead Carrying.)

**Cranes, Bridge—**

(See Cranes, Gantry.)

**Cranes, Charging—**

Alliance Machine Co., Alliance, O.  
Case Crane Co., Columbus, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Northern Engineering Works, Detroit, Mich.

Pawling & Harnischfeger, Milwaukee, Wis.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey, Ill.

**Cranes, Dock—**

Alliance Machine Co., Alliance, O.  
Brown Hoisting Machinery Co., Cleveland, Cleveland Punch & Shear Works Co., Cleveland, O.

Industrial Works, Bay City, Mich.

Interstate Engineering Co., Bedford, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

Northern Engineering Works, Detroit, Mich.

Pawling & Harnischfeger, Milwaukee, Wis.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Cranes, Electric—**

Alliance Machine Co., Alliance, O.

Armington Electric Hoist Co., Euclid, O.

Alfred Box & Co., Front & Poplar Sts., Philadelphia, Pa.

Brown Hoisting Machinery Co., Cleveland, O.

Browning Engineering Co., Cleveland, O.

Case Crane Co., Columbus, O.

Cleveland Crane & Engineering Co., Wickliffe, O.

Cleveland Punch & Shear Works Co., Cleveland, O.

C. W. Hunt Co., West New Brighton, N. Y.

Morgan Engineering Co., Alliance, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

Northern Engineering Works, Detroit, Mich.

S. Obermayer Co., Cincinnati, O.

F. R. Patch Mfg. Co., Rutland, Vt.

Pawling & Harnischfeger, Milwaukee, Wis.

Shaw Electric Crane Co., Muskegon, Mich.

Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.

Taylor Machine Co., Boston, Mass.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**MERCHANTS.**

Hill, Clarke & Co., Boston, Mass.

McCoy & Brandt, Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Edgar M. Moore & Co., Pittsburgh, Pa.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

A. O. Walworth & Co., 143-147 Clinton St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.



**Cranes. Electric Bridge—**

Alliance Machine Co., Alliance, O.  
 Cleveland Crane & Engineering Co.,  
 Wickliffe, O.  
 Interstate Engineering Co., Bedford, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Morgan Engineering Co., Alliance, O.  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.

Northern Engineering Works, Detroit,  
 Mich.

Shaw Electric Crane Co., Muskegon, Mich.  
 Shepard Electric Crane & Hoist Co.,  
 Montour Falls, N. Y.

Wellman-Seaver-Morgan Co., Cleveland, O.  
 Whiting Foundry Equipment Co., Harvey,  
 Ill.

Yale & Towne Mfg. Co., 9 Murray St.,  
 New York.

**Cranes. Electric Revolving—**

Alliance Machine Co., Alliance, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.

Northern Engineering Works, Detroit,  
 Mich.

Wellman-Seaver-Morgan Co., Cleveland.  
 Whiting Foundry Equipment Co., Harvey,  
 Ill.

Yale & Towne Mfg. Co., 9 Murray St.,  
 New York.

**Cranes. Floating—**

Brown Hoisting Machinery Co., Cleveland,  
 Interstate Engineering Co., Bedford, O.  
 Wellman-Seaver-Morgan Co., Cleveland.

**Cranes for Riveters—**

Alliance Machine Co., Alliance, O.  
 Morgan Engineering Co., Alliance, O.  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.

Northern Engineering Works, Detroit,  
 Mich.

Pawling & Harnischfeger, Milwaukee,  
 Wis.

Shepard Electric Crane & Hoist Co.,  
 Montour Falls, N. Y.

Whiting Foundry Equipment Co., Harvey,  
 Ill.

R. D. Wood & Co., 400 Chestnut St.,  
 Philadelphia, Pa.

Yale & Towne Mfg. Co., 9 Murray St.,  
 New York.

**MERCHANTS.**

Manning, Maxwell & Moore, Inc., 85-89  
 Liberty St., New York.

Joseph T. Ryerson & Son, 18-22 Milwaukee  
 Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and  
 Wayman Sts., Chicago, Ill.

**Cranes. Gantry—**

Alliance Machine Co., Alliance, O.  
 Boston Bridge Works, Boston, Mass.

Brown Hoisting Machinery Co., Cleveland.  
 Browning Engineering Co., Cleveland, O.

Case Crane Co., Columbus, O.  
 Cleveland Punch & Shear Works Co.,  
 Cleveland, O.

Interstate Engineering Co., Bedford, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.  
 Wm. S. Nicholls, 253 Broadway, N. Y.

Niles-Bement-Pond Co., 111 Broadway,  
 New York.

Northern Engineering Works, Detroit,  
 Mich.

Pawling & Harnischfeger, Milwaukee, Wis.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey,  
 Ill.

Yale & Towne Mfg. Co., 9 Murray St.,  
 New York.

**Cranes. Ganetry. Cantilever—**

Cleveland Punch & Shear Works Co.,  
 Cleveland, O.

**Cranes. Hand Power—**

Alliance Machine Co., Alliance, O.  
 Bethlehem Foundry & Machine Co., South  
 Bethlehem, Pa.

Boston Bridge Works, Boston, Mass.  
 Alfred Box & Co., Front & Poplar Sts.,  
 Philadelphia, Pa.

Brown Hoisting Machinery Co., Cleveland.  
 Byram & Co., Detroit, Mich.

Case Crane Co., Columbus, O.  
 Chisholm & Moore Mfg. Co., Cleveland, O.

Cleveland Crane & Engineering Co.,  
 Wickliffe, O.

Cleveland Punch & Shear Works Co.,  
 Cleveland, O.

Franklin Portable Crane & Hoist Co.,  
 Franklin, Pa.

Interstate Engineering Co., Bedford, O.  
 S. G. Milton & Son, Franklin, Pa.

Morgan Construction Co., Worcester,  
 Mass.

Niles-Bement-Pond Co., 111 Broadway,  
 New York.

Northern Engineering Works, Detroit,  
 Mich.

S. Obermayer Co., Cincinnati, O.  
 Pawling & Harnischfeger, Milwaukee, Wis.

Shepard Electric Crane & Hoist Co.,  
 Montour Falls, N. Y.

J. G. Speidel, Reading, Pa.

Taylor Machinery Co., Boston, Mass.

Van Dorn Iron Works Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey,  
 Ill.

Yale & Towne Mfg. Co., 9 Murray St.,  
 New York.

**MERCHANTS.**

McCoy & Brandt, Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85-89  
 Liberty St., New York.

Wm. S. Nicholls, 253 Broadway, N. Y.

Vandyck-Churchill Co., 8 Dey St., New  
 York.

Wickes Bros., Saginaw, Mich.

A. O. Walworth & Co., 143-147 Clinton  
 St., Chicago, Ill.

**Cranes. Hand Traveling—**

Alliance Machine Co., Alliance, O.  
 Bethlehem Foundry & Machine Co.,  
 South Bethlehem, Pa.

Boston Bridge Works, Boston, Mass.

Brown Hoisting Machinery Co., Cleveland.

Byram & Co., Inc., Detroit, Mich.

Case Crane Co., Columbus, O.

Chisholm & Moore Mfg. Co., Cleveland O.

Interstate Engineering Co., Bedford, O.

Franklin Moore Co., Winsted, Ct.

Morgan Construction Co., Worcester,  
 Mass.

Niles-Bement-Pond Co., 111 Broadway,  
 New York.

Northern Engineering Works, Detroit, Mich.  
F. H. Patch Mfg. Co., Rutland, Vt.  
Pawling & Harnischfeger, Milwaukee, Wis.  
Reading Crane & Hoist Works, Reading, Pa.  
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
J. G. Speidel, Reading, Pa.  
Taylor Machinery Co., Boston, Mass.  
Whiting Foundry Equipment Co., Harvey, Ill.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**MERCHANTS.**

Hill, Clarke & Co., Boston, Mass.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Wm. S. Nicholls, 253 Broadway, N. Y.  
Vandyck-Churchill Co., 8 Dey St., N. Y.  
**Cranes, Hydraulic—**  
Alliance Machine Co., Alliance, O.  
Chambersburg Engineering Co., Chambersburg, Pa.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
Lewis Foundry & Machine Co., Groveton, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morgan Construction Co., Worcester, Mass.  
Morgan Engineering Co., Alliance, O.  
S. Obermayer Co., Cincinnati, O.  
Shaw Electric Crane Co., Muskegon, Mich.  
United Engineering & Foundry Co., Pittsburgh, Pa.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
Whiting Foundry Equipment Co., Harvey, Ill.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.  
Wright Wire Co., Worcester, Mass.

**Cranes, Hydraulic, Ingot and Ladle—**

Alliance Machine Co., Alliance, O.  
Chambersburg Engineering Co., Chambersburg, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morgan Engineering Co., Alliance, O.  
Shaw Electric Crane Co., Muskegon, Mich.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Cranes, Hydraulic Jib—**

Alliance Machine Co., Alliance, O.  
Chambersburg Engineering Co., Chambersburg, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.  
Shaw Electric Crane Co., Muskegon, Mich.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Cranes, Hydro-Pneumatic—**

Alliance Machine Co., Alliance, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morgan Engineering Co., Alliance, O.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Cranes, Ice—**

Northern Engineering Works, Detroit, Mich.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Cranes, Ingot—**

Alliance Machine Co., Alliance, O.  
Case Crane Co., Columbus, O.  
Pawling & Harnischfeger, Milwaukee, Wis.

**Cranes, Jib—**

Alliance Machine Co., Alliance, O.  
Boston Bridge Works, Boston, Mass.  
Alfred Box & Co., Front & Poplar Sts., Philadelphia, Pa.  
Brown Hoisting Machinery Co., Cleveland, O.  
Byram & Co., Inc., Detroit, Mich.  
Case Crane Co., Columbus, O.  
Cleveland Crane & Engineering Co., Wickliffe, O.  
Cleveland Punch & Shear Works Co., Cleveland, O.  
Industrial Works, Bay City, Mich.  
Interstate Engineering Co., Bedford, O.  
Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Northern Engineering Works, Detroit, Mich.  
S. Obermayer Co., Cincinnati, O.  
Pawling & Harnischfeger, Milwaukee, Wis.

J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.  
Craig Ridgway & Son Co., Coatesville, Pa.  
Hiter-Conley Mfg. Co., Pittsburgh, Pa.  
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
J. G. Speidel, Reading, Pa.

Whiting Foundry Equipment Co., Harvey, Ill.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**MERCHANTS.**

Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.  
McCoy & Brandt, Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Wm. S. Nicholls, 253 Broadway, N. Y.  
Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.  
Wickes Bros., Saginaw, Mich.

**Cranes, Ladle—**

Alliance Machine Co., Alliance, O.  
Case Crane Co., Columbus, O.  
Cleveland Punch & Shear Works Co., Cleveland, O.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Northern Engineering Works, Detroit, Mich.  
Pawling & Harnischfeger, Milwaukee, Wis.  
Shaw Electric Crane Co., Muskegon, Mich.

Wellman-Seaver-Morgan Co., Cleveland.  
Whiting Foundry Equipment Co., Harvey, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

#### **Cranes, Locomotive—**

Brown Hoisting Machinery Co., Cleveland.  
Browning Engineering Co., Cleveland, O.  
Cleveland Punch & Shear Works Co., Cleveland, O.

Industrial Works, Bay City, Mich.  
Interstate Engineering Co., Bedford, O.  
Link Belt Co., Inc., Philadelphia, Pa.  
Northern Engineering Works, Detroit, Mich.

Pawling & Harnischfeger, Milwaukee, Wis.

Wellman-Seaver-Morgan Co., Cleveland.

#### **MERCHANTS.**

W. R. Beatty Machinery & Equipment Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

#### **Cranes, Locomotive Electric—**

Interstate Engineering Co., Bedford, O.  
Link Belt Co., Inc., Philadelphia, Pa.

Pawling & Harnischfeger, Milwaukee, Wis.

**Cranes, Locomotive Water—**  
Sheffield Car Co., Three Rivers, Mich.

#### **Cranes, Magnet—**

Browning Engineering Co., Cleveland, O.  
Interstate Engineering Co., Bedford, O.

Northern Engineering Works, Detroit, Mich.

Pawling & Harnischfeger, Milwaukee, Wis.

#### **Cranes, Ore and Coal Bucket—**

Cleveland Punch & Shear Works Co., Cleveland, O.

Interstate Engineering Co., Bedford, O.

#### **Cranes, Pillar—**

Alliance Machine Co., Alliance, O.  
Cleveland Punch & Shear Works Co., Cleveland, O.

Industrial Works, Bay City, Mich.  
Interstate Engineering Co., Bedford, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Northern Engineering Works, Detroit, Mich.

Pawling & Harnischfeger, Milwaukee, Wis.

Shaw Electric Crane Co., Muskegon, Mich.  
Whiting Foundry Equipment Co., Harvey, Ill.

#### **Cranes, Pneumatic—**

Brown Hoisting Machinery Co., Cleveland.  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Northern Engineering Works, Detroit, Mich.

Shaw Electric Crane Co., Muskegon, Mich.  
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.

Whiting Foundry Equipment Co., Harvey, Ill.

#### **MERCHANTS.**

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Edgar M. Moore & Co., Pittsburgh, Pa.

Wm. S. Nicholls, 253 Broadway, N. Y.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

#### **Cranes, Pneumatic Revolving—**

Northern Engineering Works, Detroit, Mich.

Whiting Foundry Equipment Co., Harvey, Ill.

#### **Cranes, Portable Hand Power—**

Brown Hoisting Machinery Co., Cleveland.

Franklin Portable Crane & Hoist Co., Franklin, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

S. G. Milton & Son, Franklin, Pa.

Wm. S. Nicholls, 251 Broadway, New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Northern Engineering Works, Detroit, Mich.

Pawling & Harnischfeger, Milwaukee, Wis.

Shaw Electric Crane Co., Muskegon, Mich.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

#### **Cranes, Railroad—**

Alliance Machine Co., Alliance, O.  
Browning Engineering Co., Cleveland, O.

Industrial Works, Bay City, Mich.  
Interstate Engineering Co., Bedford, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.  
Northern Engineering Works, Detroit, Mich.

Wellman-Seaver-Morgan Co., Cleveland.  
Whiting Foundry Equipment Co., Harvey, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

#### **Cranes, Self Supporting.**

##### **Jib—**

Alliance Machine Co., Alliance, O.  
Northern Engineering Works, Detroit, Mich.

Pawling & Harnischfeger, Milwaukee, Wis.

Whiting Foundry Equipment Co., Harvey, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

##### **Cranes, Steam—**

Cleveland Punch & Shear Works Co., Cleveland, O.

Interstate Engineering Co., Bedford, O.  
Lewis Foundry & Machine Co., Groveton, Pa.

Link-Belt Co., Philadelphia, Pa.  
Morgan Construction Co., Worcester, Mass.

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

##### **Cranes, Steam-Hydraulic—**

Morgan Construction Co., Worcester, Mass.

Craig Ridgway & Son Co., Coatesville, Pa.

**Cranes, Traveling Hydraulic—**

Alliance Machine Co., Alliance, O.  
Chambersburg Engineering Co., Chambersburg, Pa.

**Cranes, Traveling Jib—**

Alliance Machine Co., Alliance, O.  
Case Crane Co., Columbus, O.  
Cleveland Punch & Shear Works Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Northern Engineering Works, Detroit, Mich.

Pawling & Harnischfeger, Milwaukee, Wis.

Whiting Foundry Equipment Co., Harvey, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Cranes, Traveling, Power—**

Alliance Machine Co., Alliance, O.  
Armington Electric Hoist Co., Euclid, O.  
Boston Bridge Works, Boston, Mass.  
Alfred Box & Co., Front & Poplar Sts., Philadelphia, Pa.  
Brown Hoisting Machinery Co., Cleveland, O.  
Browning Engineering Co., Cleveland, O.  
Case Crane Co., Columbus, O.  
Cleveland Crane & Engineering Co., Wickliffe, O.

Edwin Harrington, Son & Co. (Inc.), Philadelphia, Pa.

Interstate Engineering Co., Bedford, O.  
Lane Mfg. Co., Montpelier, Vt.

Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Pawling & Harnischfeger, Milwaukee, Wis.

Craig Ridgway & Son Co., Coatesville, Pa.

Shaw Electric Crane Co., Muskegon, Mich.

Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey, Ill.

R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**MERCHANTS.**

Hill, Clarke & Co., Boston, Mass.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Edgar M. Moore & Co., Pittsburgh, Pa.

S. Obermayer Co., Cincinnati, O.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

A. O. Walworth & Co., 143-147 Clinton St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

**Cranes, Traveling Wall—**

Alliance Machine Co., Alliance, O.  
Case Crane Co., Columbus, O.

Pawling & Harnischfeger, Milwaukee, Wis.

Whiting Foundry Equipment Co., Harvey, Ill.

**Cranes, Wire Cleaning—**

(See Cranes, Steam.)

**Cranes, Wrecking—**

Brown Hoisting Machinery Co., Cleveland, O.  
Browning Engineering Co., Cleveland, O.  
Industrial Works, Bay City, Mich.  
Interstate Engineering Co., Bedford, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Crank Boring Machines—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Crank Forgings—**

Billings & Spencer Co., Hartford, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Pennsylvania Forge Co., Philadelphia, Pa.

**Crank Handles—**

(See Handles, Grass Hook, &c.)

**Crank Hangers, Bicycle—**

(See Bicycle Parts.)

**Crank Pin Machines, Portable—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Crank Pin Turning Machines—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Pratt & Whitney Co., Hartford, Ct.  
Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.  
Tindel-Morris Co., Eddystone, Pa.  
H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Crank Pins, Shafts—**

(See Pins, Shafts.)

**Crank Planing Machines—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Crank Shafts, Welding of—**

(See Welding, Electric.)

**Cranks, Auger—**

Hubbard & Co., Pittsburgh, Pa.

**Cranks, Gas Engine—**

Thomas Prosser & Son, 26 Platt St., N. Y.  
Richmond Forging Corporation, Richmond, Va.

Tindel-Morris Co., Eddystone, Pa.

A. P. Witterman & Co., 1223 Spring St., Philadelphia, Pa.

**Craxons, Lumber, Marble, Metal Workers', &c.—**

D. C. Adams, St. Louis, Mo.  
Jos. Dixon Crucible Co., Jersey City, N. J.

**Creasers, Blacksmiths'—**

Heller Bros. Co., Newark, N. J.

**Creepers, Ice—**

Geo. E. Gay, Augusta, Me.

Gifford-Wood Co., Arlington, Mass.

Judson L. Thomson Mfg. Co., Waltham, Mass.

Union Hardware Co., Torrington, Ct.

### **Crematories—**

Kiln & Chimney Construction Co., Brooklyn, N. Y.

### **Crematories, Garbage—**

Power Specialty Co., 111 Broadway, N. Y.

S. R. Smythe Co., Pittsburgh, Pa.

### **Cresting Blocks—**

(See Cresting, Sheet Metal.)

### **Crestings, Cast Iron—**

(See Iron, Brass and Bronze, Ornamental.)

### **Crestings, Sheet Metal—**

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

### **Crimping Machines, Automatic, Wire—**

Automatic Machine Co., Bridgeport, Ct.

### **Crimping Machines, Metal—**

Adriance Machine Works, Brooklyn, N. Y.

Bertsch & Co., Cambridge City, Ind.

E. W. Bliss Co., Brooklyn, N. Y.

Consolidated Press & Tool Co., Hastings, Mich.

Ferracute Machine Co., Bridgeton, N. J.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niagara Machine & Tool Works, Buffalo, N. Y.

George A. Ohl & Co., Newark, N. J.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

South Bend Machine Tool Co., South Bend, Ind.

### **Crimping Rolls—**

(See Rolls, Crimping.)

### **Crooks, Shepherd's—**

American Fork & Hoe Co., Cleveland, O.

### **Cross Arm Braces—**

(See Telegraph and Telephone Supplies.)

### **Cross Arms—**

(See Telegraph and Telephone Pole Supplies.)

### **Crosscut Saws—**

(See Saws, Mill, Mulay, Crosscut, &c.)

### **Crossings, Railroad—**

Indianapolis Switch & Frog Co., Springfield, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

### **Crowfeet, Iron—**

I. S. Spencer's Sons, Guilford, Ct.

### **Crowns, Bicycle—**

(See Bicycle Parts.)

### **Crucibles and Dishes, Platinum—**

Baker & Co., Inc., Newark, N. J.

J. Bishop & Co., Malvern, Pa.

### **Crucibles and Retorts—**

Jos. Dixon Crucible Co., Jersey City, N. J.

McCullough-Dalzell Crucible Co., Pittsburgh, Pa.

Louis Sacks Foundry Co., Newark, N. J.

R. B. Seidel, Inc., 1334 Callowhill St., Philadelphia, Pa.

### **MERCHANTS.**

S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.

### **Crumbers, Bread—**

Goodell Co., Antrim, N. H.

### **Crusher Plates—**

Chrome Steel Works, Chrome, N. J.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.

Taylor Iron & Steel Co., High Bridge, N. J.

Tropenas Steel Co., New Castle, Del.

### **Crushers, Ore and Rock—**

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Erdle Perforating Co., Rochester, N. Y.

Farrel Foundry & Machine Co., Ansonia, Ct.

C. W. Hunt Co., West New Brighton, N. Y.

Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Philadelphia, Pa.

Poole Engineering & Machine Co., Baltimore, Md.

Thomas Prosser & Son, 26 Platt St., N. Y.

United Engineering & Foundry Co., Pittsburgh, Pa.

Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

Wellman-Seaver-Morgan Co., Cleveland, O.

### **MERCHANTS.**

Thomas P. Conard & Co., 119 S. 4th St., Philadelphia, Pa.

Edgar M. Moore & Co., Pittsburgh, Pa.

Wickes Bros., Saginaw, Mich.

### **Crushers, Ore and Rock.**

**Parts for—**

Erdle Perforating Co., Rochester, N. Y.

Hendrick Mfg. Co., Carbondale, Pa.

Link-Belt Co., Philadelphia, Pa.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.

Taylor Iron & Steel Co., High Bridge, N. J.

### **Cryolite—**

Vollkommer & Co., Pittsburgh, Pa.

### **Cube Head Bolts—**

(See Bolts, Special.)

### **Culinary Baskets—**

(See Kitchen Articles, Wire.)

### **Cultivators—**

American Fork & Hoe Co., Cleveland, O.

Bateman Mfg. Co., Glenloch, N. J.

Hayes Pump & Planter Co., Galva, Ill.

Keystone Farm Machine Co., York, Pa.

Long & Allstatter Co., Hamilton, O.

Syracuse Chilled Plow Co., Syracuse, N. Y.

Ulrich Mfg. Co., Rock Falls, Ill.

### **Cup Holders—**

(See Holders.)

### **Cup Hooks—**

(See Hooks, Cup, Shoulder.)

### **Cunboard Bolts, Catches, &c.—**

(See Bolts, Catches, &c.)

### **Cupola Linings—**

(See Linings, Cupola.)

### **Cupolas—**

Ryram & Co., Inc., Detroit, Mich.

Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.

J. Gilmour, Bennett Bldg., N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Meehan Boiler & Construction Co., Lowellville, O.  
Northern Engineering Works, Detroit, Mich.

S. Obermayer Co., Cincinnati, O.  
J. W. Paxson Co., Philadelphia, Pa.  
Ritter-Conley Mfg. Co., Pittsburgh, Pa.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Cupolas, Portable—**

Byram & Co., Detroit, Mich.  
Northern Engineering Works, Detroit, Mich.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Cups, Aluminum—**

Otto Konigslow Mfg. Co., Cleveland, O.  
Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

**Cups and Cones, Ball Bearing—**

Crosby Co., Buffalo, N. Y.  
Hartford Machine Screw Co., Hartford, H. A. Matthews Mfg. Co., Seymour, Ct.

**Cups and Shells, Drawn Steel—**

Globe Machine & Stamping Co., Cleveland, O.  
R. C. Jenkinson & Co., Newark, N. J.  
Otto Konigslow Mfg. Co., Cleveland, O.  
Worcester Pressed Steel Co., Worcester, Mass.

**Cups, Children's, Shaving, &c., Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Cups, Collapsible—**

Otto Konigslow Mfg. Co., Cleveland, O.

**Cups, Drip, Shafting—**

Worcester Pressed Steel Co., Worcester, Mass.

**Cups, Elevator—**

(See Buckets and Cups.)

**Cups, Golf—**

Gem Mfg. Co., Pittsburgh, Pa.

**Cups, Grease—**

Charles H. Besly & Son Co., Western St., Chicago, Ill.

H. W. Caldwell & Son Co., Western Ave. & 17th St., Chicago, Ill.

Lunkenheimer Co., Cincinnati, O.

Wm. Powell Co., Cincinnati, O.

Robins Conveying Belt Co., Passaic, N. J.

Walworth Mfg. Co., Boston, Mass.

**Cups, Mill—**

W. J. Clark Co., Salem, O.

**Cups, Oil—**

Chas. H. Besly Co., 15-21 S. Clinton St., Chicago, Ill.

Eynon-Evans Mfg. Co., 1517 Clearfield St., Philadelphia, Pa.

Hancock Inspirator Co., 85-89 Liberty St., New York.

Lunkenheimer Company, Cincinnati, O.

Walworth Mfg. Co., Boston, Mass.

**Cups, Shoemaker's Nail—**

Louis Sacks, Newark, N. J.

**Cups, Wax Melting—**

Wrightsville Hardware Co., Wrightsville, Pa.

**Curbs, Well—**

W. & B. Douglas, Middletown, Ct.

**Curled Hair—**

(See Hair, Curled.)

**Curling Sets—**

(See Sets.)

**Curry Combs—**

(See Combs, Curry.)

**Curtain and Upholstery Fixtures—**

Farker Wire Goods Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

**Curtain Pole Fixtures—**

Baker-McMillen Co., Akron, O.

**Curtain Rod Fixtures—**

Wire Goods Co., Worcester, Mass.

**Curtain Rods, Straps—**

(See Rods, Straps.)

**Cushions, Billiard and Pool Table—**

New York Belting & Packing Co., 91-93 Chambers St., New York.

**Cushions, Steel Wire—**

Parker Wire Goods Co., Worcester, Mass.

**Cuspidors—**

Bethlehem Foundry & Machine Co., Bethlehem, Pa.

Bridgeport Brass Co., 253 B'way, N. Y.

S. Cheney & Son, Manlius, N. Y.

Dover Stamping & Mfg. Co., Cambridge, Mass.

Ireland & Matthews Mfg. Co., Detroit, Mich.

Riverside Metal Co., Riverside, N. J.

Stuart & Peterson Co., Burlington, N. J.

Turner Brass Works, Sycamore, Ill.

Jacob J. Vollrath Mfg. Co., Sheboygan, Wis.

**Cut Nail Machines—**

H. J. Miller's Sons, Bridgewater, Mass.

**Cutlery, Pocket—**

Hermann Boker & Co., 101-103 Duane St., New York.

John Chatillon & Sons, 85-93 Cliff St., N. Y.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Adolph Kastor & Bros., 109 Duane St., New York.

Northfield Knife Co., Northfield, Ct.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Cutlery, Silver Plated—**

American Cutlery Co., Chicago, Ill.

Goodell Co., Antrim, N. H.

**Cutlery, Table—**

American Cutlery Co., Chicago, Ill.

Goodell Co., Antrim, N. H.

Larders, Frary & Clark, New Britain, Ct.

Charles Parker Co., Meriden, Ct.

**Cuts, Advertising—**

A. Mugford, Hartford, Ct.

**Cutter Blanks, Milling—**

Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.

W. & S. Mfg. Co., Worcester, Mass.

**Cutter Blanks, Mushet High Speed Milling—**

Samuel Osborn & Co., Boston, Mass.

**Cutter Grinding Machines—**

(See Grinding Machines, Cutter and Reamer.)

**Cutters, Alfalfa and Clover—**

Humphrey & Sons, Joliet, Ill.

Silver Mfg. Co., Salem, O.

**Cutters and Corers, Apple—**

Rothman Mfg. Co., Mt. Joy, Pa.

**Cutters and Pulpers, Vegetable—**

Silver Mfg. Co., Salem, O.

**Cutters, Angle and Tee—**

(See Cutters, Bar.)

**Cutters, Angular Form, Inscribed Tooth, Side Tap, &c.**

(See Cutters, Mill.)

**Cutters, Asphalt—**

Oliver Iron &amp; Steel Co., Piquette, Pa.

**Cutters, Axle—**

Buffalo Forge Co., Buffalo, N. Y.

Butterfield &amp; Co., Derby Line, Vt.

Fawcett Machine Co., Pittsburg, Pa.

**Cutters, Bar—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

Buffalo Forge Co., Buffalo, N. Y.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

C. S. Merdick &amp; Co., New Haven, Ct.

Niagara Machine &amp; Tool Works, Buffalo.

George A. Oehl &amp; Co., Newark, N. J.

**Cutters, Boiler Tube—**

Fox Machine Co., Grand Rapids, Mich.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

D. Saunders' Sons, Yonkers, N. Y.

Stow Flexible Shaft Co., 26th &amp; Callowhill Sts., Philadelphia, Pa.

**Cutters, Bolt—**

Acme Machinery Co., Cleveland, O.

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

Badger State Machine Co., Janesville, Wis.

Detrick &amp; Harvey Mach. Co., Baltimore.

Landis Machine Co., Waynesboro, Pa.

National Machinery Co., Tiffin, O.

New Haven Mfg. Co., New Haven, Ct.

Niles-Rement-Pond Co., 111 Broadway, New York.

Pratt &amp; Whitney Co., Hartford, Ct.

E. F. Reeco Co., Greenfield, Mass.

Webster &amp; Perks Tool Co., Springfield, O.

Wells Bros. Co., Greenfield, Mass.

Wiley &amp; Russell Mfg. Co., Greenfield, Mass.

**MERCHANTS.**

BaIRD Machinery Co., Pittsburgh, Pa.

Hill, Clarke &amp; Co., Boston, Mass.

Manning, Maxwell &amp; Moore, Inc., 85-89 Liberty St., New York.

Marshall &amp; Hueschart Machinery Co., 62-64 So. Canal St., Chicago, Ill.

Metcalf &amp; Merryweather Machinery Co., Cleveland, O.

Prentiss Tool &amp; Supply Co., 115 Liberty St., New York.

Scully Steel &amp; Iron Co., 69 N. Halsted St., Chicago, Ill.

Vandyck-Churchill Co., 8 Dey St., N. Y.

A. D. White Machinery Co., 39-41 E. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

**Cutters, Bolt, Opening Dies—**

Wells Bros. Co., Greenfield, Mass.

Wiley &amp; Russell Mfg. Co., Greenfield, Mass.

**Cutters, Butter—**

Cleveland Galvanizing Works, Cleveland.

**Cutters, Button Hole—**

W. H. Compton Shear Co., Newark, N. J.

Evolet Tool Co., Boston, Mass.

R. Heimsch's Sons Co., Newark, N. J.

**Cutters, Cabbage—**

American Fork &amp; Hoe Co., Cleveland, O.

**Cutters, Cake and Dough-nut—**

Lasher Mfg. Co., Davenport, Ia.

**Cutters, Chain Link—**

Brown &amp; Sharpe Mfg. Co., Providence, R. I.

Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, O.

**Cutters, Cigar—**

Billings &amp; Spencer Co., Hartford, Ct.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

**Cutters, Convex and Concave—**

Becker Milling Machine Co., Hyde Park, Mass.

Brown &amp; Sharpe Mfg. Co., Providence, R. I.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill &amp; Machine Co., New Bedford, Mass.

Pratt &amp; Whitney Co., Hartford, Ct.

Standard Tool Co., Cleveland, O.

**Cutters, Cork, Cloth, Leather, Paper—**

Henry Disston &amp; Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.

Simonds Mfg. Co., Fitchburg, Mass.

**Cutters, Diamond—**

J. L. Osgood, Buffalo, N. Y.

**Cutters, Emery Wheel—**

(See Dressers, Emery Wheel.)

**Cutters, Feed and Ensilage—**

S. Freeman &amp; Sons Mfg. Co., Racine, Wis.

Keystone Farm Machine Co., York, Pa.

Ney Mfg. Co., Canton, O.

Silver Mfg. Co., Salem, O.

**Cutters, Flue, Pneumatic—**

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Ingersoll-Rand Co., 11 Broadway, New York.

Stow Flexible Shaft Co., 26th &amp; Callowhill Sts., Philadelphia, Pa.

**Cutters, Formed—**

(See Cutters, Milling.)

**Cutters, Gang—**

(See Cutters, Milling.)

**Cutters, Gear—**

(See Cutters, Milling, and also Gear Cutting Machines.)

**Cutters, Glass—**

W. L. Barrett, Bristol, Ct.

Goodell-Pratt Co., Greenfield, Mass.

H. H. Mayhew Co., Shelburne Falls, Mass.

Millers Falls Co., 28 Warren St., N. Y.

**Cutters, Glass, Circle—**

Wm. L. Barrett, Bristol, Ct.

**Cutters, Glass, Diamond—**

N. E. Dickinson, 47 Maiden Lane, N. Y.

Thos. L. Dickinson, 61 Nassau St., N. Y.

**Cutters, Glass, Tube—**

W. L. Barrett, Bristol, Ct.

N. E. Dickinson, 47 Maiden Lane, N. Y.

Thos. L. Dickinson, 61 Nassau St., N. Y.

Goodell-Pratt Co., Greenfield, Mass.

Lunkenheimer Co., Cincinnati, O.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

**Cutters, Golf Cup Hole—**

Gem Mfg. Co., Pittsburgh, Pa.

**Cutters, Green Bone—**  
Humphrey & Sons, Joliet, Ill.

**Cutters, Gunmer—**  
E. C. Atkins & Co., Indianapolis, Ind.

**Cutters, Hand Power Bar—**  
Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

**Cutters, Interlocking—**  
(See Cutters, Milling.)

**Cutters, Key Seat Milling—**  
(See Milling Machines, Key Seat.)

**Cutters, Key Way—**  
(See Key Way Machines.)

**Cutters, Letter, Steel and Brass—**  
Albert B. Curtis, Worcester, Mass.

**Cutters, Lock Corner—**  
Schwerdtle Stamp Co., Bridgeport, Ct.

**Cutters, Meat, Food and Vegetable—**  
Henry Diston & Sons, Philadelphia, Pa.

**Cutters, Rivet, Hand—**  
American Cutlery Co., Chicago, Ill.

**Cutters, Rivet, Power—**  
E. C. Atkins & Co., Indianapolis, Ind.

**Cutters, Rod—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

**Cutters, Saw—**  
Dana Mfg. Co., Cincinnati, O.

**Cutters, Twist Drill—**  
Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

**Cutters, Milling—**  
John H. Graham & Co., 113 Chambers St., New York.

**Cutters, Paper—**  
Landers, Frary & Clark, New Britain, Ct.

**Cutters, Pipe and Tube—**  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Cutters, Sprocket Wheel—**  
Bollman Mfg. Co., Mount Joy, Pa.

**Cutters, Steel and Brass—**  
Russell & Erwin Mfg. Co., 43-47 Chambers St., New York.

**Cutters, Taper—**  
Becker Milling Machine Co., Hyde Park, Mass.

**Cutters, Twist Drill—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

**Cutters, Vise—**  
Cleveland Twist Drill Co., Cleveland, O.

**Cutters, Wire—**  
R. M. Clough, Tolland, Ct.

**Cutters, Worm—**  
Garvin Machine Co., Spring and Varick Sts., New York.

**Cutters, Worm Gear—**  
Gould & Eberhardt, Newark, N. J.

**Cutters, Worm Wheel—**  
Ingersoll Milling Machine Co., Rockford, Ill.

**Cutters, Worm Wheel—**  
Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

**Cutters, Worm Wheel—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Cutters, Worm Wheel—**  
Morse Twist Drill & Machine Co., New Bedford, Mass.

**Cutters, Worm Wheel—**  
National Tool Co., Cleveland, O.

**Cutters, Worm Wheel—**  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Cutters, Worm Wheel—**  
Pratt & Whitney Co., Hartford, Ct.

**Cutters, Worm Wheel—**  
Standard Tool Co., Cleveland, O.

**Cutters, Worm Wheel—**  
Hobbs Mfg. Co., Worcester, Mass.

**Cutters, Worm Wheel—**  
American Tube & Stamping Co., Bridgeport, Ct.

**Cutters, Worm Wheel—**  
Barnes Tool Co., New Haven, Ct.

**Cutters, Worm Wheel—**  
Bignall & Keeler Mfg. Co., Edwardsville, Ill.

**Cutters, Worm Wheel—**  
Butterfield & Co., Derby Line, Vt.

**Cutters, Worm Wheel—**  
Fox Machine Co., Grand Rapids, Mich.

**Cutters, Worm Wheel—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Cutters, Worm Wheel—**  
National-Acme Mfg. Co., Cleveland, O.

**Cutters, Worm Wheel—**  
National Machinery Co., Tiffin, O.

**Cutters, Worm Wheel—**  
R. S. Newbold & Son Co., Norristown, Pa.

**Cutters, Worm Wheel—**  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Cutters, Worm Wheel—**  
Pratt & Whitney Co., Hartford, Ct.

**Cutters, Worm Wheel—**  
D. Saunders' Sons, Yonkers, N. Y.

**Cutters, Worm Wheel—**  
Stoeber Foundry & Mfg. Co., Myerstown, Pa.

**Cutters, Worm Wheel—**  
Trimont Mfg. Co., Roxbury, Mass.

**Cutters, Worm Wheel—**  
Walworth Mfg. Co., Boston, Mass.

**Cutters, Worm Wheel—**  
F. E. Wells & Sons Co., Greenfield, Mass.

**Cutters, Worm Wheel—**  
J. H. Williams & Co., Brooklyn, N. Y.

**Cutters, Worm Wheel—**  
James Swan Co., Seymour, Ct.

**Cutters, Worm Wheel—**  
Landers, Frary & Clark, New Britain, Ct.

**Cutters, Worm Wheel—**  
Roman Mfg. Co., Mt. Joy, Pa.

**Cutters, Worm Wheel—**  
Cutter, Reamer and Twist Drill—

**Cutters, Worm Wheel—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

**Cutters, Worm Wheel—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Cutters, Worm Wheel—**  
National Tool Co., Cleveland, O.

**Cutters, Worm Wheel—**  
Pratt & Whitney Co., Hartford, Ct.

**Cutters, Worm Wheel—**  
Standard Tool Co., Cleveland, O.

**Cutters, Worm Wheel—**  
Walworth Mfg. Co., Boston, Mass.

**Cutters, Worm Wheel—**  
Kimball Bros. & Sprague, Brockton, Mass.

**Cutters, Worm Wheel—**  
Kimball Bros. & Sprague, Brockton, Mass.

**Cutters, Worm Wheel—**  
Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

**Cutters, Worm Wheel—**  
Badger State Machine Co., Janesville, Wis.

**Cutters, Worm Wheel—**  
Belden Machine Co., New Haven, Ct.

**Cutters, Worm Wheel—**  
Chandler & Farquhar Co., Boston, Mass.

**Cutters, Worm Wheel—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Cutters, Worm Wheel—**  
C. S. Mersick & Co., New Haven, Ct.

**Cutters, Worm Wheel—**  
Morgan Construction Co., Worcester, Mass.

**Cutters, Worm Wheel—**  
Niagara Machine & Tool Works, Buffalo.

**Cutters, Worm Wheel—**  
Watson-Stillman Co., 50 Church St., N. Y.

**Cutters, Worm Wheel—**  
Lane Bros. Co., Poughkeepsie, N. Y.

**Cutters, Worm Wheel—**  
Silver Mfg. Co., Salem, O.

**Cutters, Worm Wheel—**  
R. W. Whitehurst Co., Norfolk, Va.

**Cutters, Worm Wheel—**  
Zeh & Hahnemann Co., Newark, N. J.

**Cutters, Worm Wheel—**  
(See Cutters, Milling.)

**Cutters, Worm Wheel—**  
E. C. Atkins & Co., Indianapolis, Ind.

**Cutters, Worm Wheel—**  
Henry Diston & Sons, Philadelphia, Pa.

**Cutters, Worm Wheel—**  
Landers, Frary & Clark, New Britain, Ct.

**Cutters, Worm Wheel—**  
National Saw Co., Newark, N. J.

**Cutters, Worm Wheel—**  
Coldwell Lawn Mower Co., Newburgh, N. Y.

**Cutters, Worm Wheel—**  
Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

**Cutters, Worm Wheel—**  
(See Edgers, Turf.)

**Cutters, Worm Wheel—**  
Becker Milling Machine Co., Hyde Park, Mass.

**Cutters, Worm Wheel—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

**Cutters, Worm Wheel—**  
Morse Twist Drill & Machine Co., New Bedford, Mass.

**Cutters, Worm Wheel—**  
National Tool Co., Cleveland, O.

**Cutters, Worm Wheel—**  
Pratt & Whitney Co., Hartford, Ct.

**Cutters, Worm Wheel—**  
Standard Tool Co., Cleveland, O.

**Cutters, Worm Wheel—**  
Adriance Machine Works, Brooklyn, N. Y.

**Cutters, Worm Wheel—**  
E. W. Bliss Co., Brooklyn, N. Y.

**Cutters, Worm Wheel—**  
Ferracute Machine Co., Bridgeton, N. J.



Hilles & Jones Co., Wilmington, Del.  
Chas. Lefrier & Co., Brooklyn, N. Y.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.

S. Obermayer Co., Cincinnati, O.  
F. B. Shuster Co., New Haven, Ct.  
Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

**Cutters, Stay Bolt—**  
Acme Machinery Co., Cleveland, O.  
Helwig Mfg. Co., St. Paul, Minn.  
Landis Machine Co., Waynesboro, Pa.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

National Machinery Co., Tiffin, O.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.

Stow Flexible Shaft Co., 26th & Callow-  
hill Sts., Philadelphia, Pa.

**Cutters, Stay Bolt, Pneu-  
matic—**

Helwig Mfg. Co., St. Paul, Minn.

**Cutters, Stocking—**  
(See Cutters, Milling.)

**Cutters, Storage Battery—**  
H. K. Porter, Everett, Mass.

**Cutters, T Slot—**  
Becker-Brainerd Milling Machine Co.,  
Hyde Park, Mass.

Brown & Sharpe Mfg. Co., Providence, R. I.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Morse Twist Drill & Machine Co., New  
Bedford, Mass.

National Tool Co., Cleveland, O.  
Standard Tool Co., Cleveland, O.

**Cutters, Thistle or Weed—**  
American Fork & Hoe Co., Cleveland, O.

**Cutters, Tobacco and Root—**  
Enterprise Mfg. Co. of Pa., Philadelphia,  
Pa.

Landers, Frary & Clark, New Britain, Ct.  
North Bros. Mfg. Co., Philadelphia, Pa.  
Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Reading Hardware Co., Reading, Pa.  
Wrightsville Hardware Co., Wrightsville,  
Pa.

**Cutters, Vegetable—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.  
Landers, Frary & Clark, New Britain, Ct.  
National Saw Co., Newark, N. J.

**Cutters, Washer—**  
Goodell-Pratt Co., Greenfield, Mass.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Otis A. Smith, Rockfall, Ct.

**Cutters, Wire—**  
Badger State Machine Co., Janesville, Wis.  
Billings & Spencer Co., Hartford, Ct.  
Bridgeport Hardware Mfg. Co., Bridge-  
port, Ct.

Helwig Mfg. Co., St. Paul, Minn.  
J. M. King & Co., Waterford, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Morgan Construction Co., Worcester,  
Mass.

Niagara Machine & Tool Works, Buffalo,  
Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

H. K. Porter, Everett, Mass.  
F. B. Shuster Co., New Haven, Ct.

(See also Pliers.)

**Cutters, Wire Rope—**  
Badger State Machine Co., Janesville,  
Wis.

A. L. Henderer's Sons, Wilmington, Del.

**Cutting and Straightening  
Machines, Wire—**  
(See Straightening and Cutting Machines,  
Wire.)

**Cutting Attachments, Cam—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

Cincinnati Milling Machine Co., Cincin-  
nati, O.

**Cutting Attachments, Rack—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

Cincinnati Milling Machine Co., Cincin-  
nati, O.

Garvin Machine Co., Spring and Varick  
Sts., New York.

**Cutting Dies, Nippers—**  
(See Dies, Nippers.)

**Cutting Machines, Rack—**  
Gould & Eberhardt, Newark, N. J.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

**Cutting-Off and Centering  
Machines, Double, for  
Axles—**

Fawcuss Machine Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

**Cutting-Off Machines—**  
E. C. Atkins & Co., Indianapolis, Ind.

Badger State Machine Co., Janesville,  
Wis.

Billings & Spencer Co., Hartford, Ct.

Birdsboro Steel Foundry & Machine Co.,  
Birdsboro, Pa.

W. P. Davis Machine Co., Rochester,  
N. Y.

Espen-Lucas Machine Works, Broad and  
Noble Sts., Philadelphia, Pa.

Fawcuss Machine Co., Pittsburgh, Pa.

Hurlbut Rogers Machine Co., South Sud-  
bury, Mass.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Tindel-Morris Co., Eddystone, Pa.

#### MERCHANTS.

Hill, Clarke & Co., Boston, Mass.

Manning, Maxwell & Moore, Inc., 85-89  
Liberty St., New York.

Marshall & Huschart Machinery Co.,  
62 S. Canal St., Chicago, Ill.

Motch & Merryweather Machinery Co.,  
Cleveland, O.

Frank Toomey, 127-131 N. 3d St., Phila-  
delphia, Pa.

Vandyck-Churchill Co., 8 Dey St., N. Y.

A. D. White Machinery Co., 39-41 S.  
Canal St., Chicago, Ill.

C. C. Wormer Machinery Co., Detroit,  
Mich.

**Cutting-Off Machines, Auto-  
matic—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

**Cutting-Off Machines, Cold Saw-**

Espen-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.  
Mesta Machine Co., Pittsburgh, Pa.  
Morgan Engineering Co., Alliance, O.  
Newton Machine Tool Works, 23d & Vine Sts., Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Pratt & Whitney Co., Hartford, Ct.

**MERCHANTS.**

Hill, Clarke & Co., Boston, Mass.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Edgar M. Moore & Co., Pittsburgh, Pa.  
Motch & Merryweather Machinery Co., Cleveland, O.  
Vandyck-Churchill Co., 8 Dey St., N. Y.  
A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

**Cutting Off Machines for Self Hardening Steel-**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Cutting-Off Machines, Log-Lane Mfg. Co., Montpelier, Vt.**

**Cutting-Off Tools-**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.  
Billings & Spencer Co., Hartford, Ct.  
Goodell Mfg. Co., Greenfield, Mass.  
Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Pratt & Whitney Co., Hartford, Ct.  
Walworth Mfg. Co., Boston, Mass.

**Cutting Torches-**

(See Torches, Welding and Cutting.)

**Cycle Hangers-**

(See Hangers.)

**Cycles-**

(See Bicycles and Sundries.)

**Cyclometers-**

John H. Graham & Co., 113 Chambers St., New York.  
Veeder Mfg. Co., Hartford, Ct.

**Cylinder Head Turning Machines-**

(See Turning Machines, Cylinder Head.)

**Cylinders, Ammonia and Carbonic Acid-**

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
Meehan Boiler & Construction Co., Lowellville, O.  
National Tube Co., Pittsburgh, Pa.  
Wm. B. Scaife & Sons Co., Pittsburgh.

**Cylinders, Deep Well-**

American Well Works, Aurora, Ill.  
W. & B. Douglas, Middletown, Ct.  
F. E. Myers & Bro., Ashland, O.

**Cylinders, Emery and Corundum-**

Monarch Emery & Corundum Wheel Co., Camden, N. J.

**Cylinders, Hydro - Pneumatic-**

F. E. Myers & Bro., Ashland, O.  
B. Scaife & Sons Co., Pittsburgh, Pa.

**Cylinders, Irrigation-**

Mast, Foos & Co., Springfield, O.  
F. E. Myers & Bro., Ashland, O.

**Cylinders, Pump-**

(See Well Supplies and Tools.)

**Cylinders, Steel-**

Avery Stamping Co., Cleveland, O.  
Meehan Boiler & Construction Co., Lowellville, O.

National Tube Co., Pittsburgh, Pa.  
Wm. B. Scaife & Sons Co., Pittsburgh.

Standard Welding Co., Cleveland, O.

**Cylinders, Welded Steel-**

American Welding Co., Carbondale, Pa.

**D Tons for Handles-**

(See Tops, Malleable D Handle.)

**Damper Clips, Regulators-**

(See Clips, Regulators.)

**Dampers, Pipe-**

American Blower Co., Detroit, Mich.  
Arcade Mfg. Co., Freeport, Ill.  
Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

S. Cheney & Son, Manlius, N. Y.  
Dover Stamping & Mfg. Co., Cambridge, Mass.

S. M. Howes Co., Boston, Mass.  
Susquehanna Casting Co., Wrightsville, Pa.

Taylor & Boggis Foundry Co., Cleveland.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Darners, Glove and Stocking-**

Baker-McMillen Co., Akron, O.  
Dashes and Fenders, Carriage, Automobile, &c.-

McKinnon Dash Co., Buffalo, N. Y.

**Dashes, Screen-**

Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 224 No. Union St., Chicago, Ill.

Manhattan Perforated Metal Co., 237 Centre St., New York.

Charles Mundt & Sons, 441-447 Pearl St., New York.

Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

**Daters-**

(See Stamps, Dating.)

**Daubers, Shoe-**

Kilbourne Mfg. Co., Troy, N. Y.

**Dead Eyes-**

(See Eyes, Dead, Bull's, &c.)

**Deck Blocks, Lights, &c.-**

(See Blocks, Lights, &c.)

**Deck Molding-**

(See Architectural Sheet Metal Work.)

**Deckhanger Bolts-**

(See Bolts, Special.)

**Deflocculated Graphite-**

(See Graphite, Deflocculated.)

**Dehorning Saws-**

(See Saws, Dehorning.)

**Delivery Wagons-**

(See Wagons, Delivery.)

**Dental Shears and Snips-**

(See Shears and Snips, Dental.)

**Dental Wheels-**

(See Wheels, Dental.)

**Dentils-**

(See Cornice, &c.; Galvanized Iron.)

**Depth Gauges—**

(See Gauges, Depth.)

**Derrick Fittings, Irons—**

(See Fittings, Irons, Derrick.)

**Derricks and Derrick Fittings—**

Broderick & Bascom Rope Co., St. Louis,  
Browning Engineering Co., Cleveland, O.  
Thomas Carlin's Sons Co., N. S. Pitts-  
burgh, Pa.

Carlin Machinery & Supply Co., Inc.,  
N. S. Pittsburgh, Pa.

Interstate Engineering Co., Bedford, O.

Lane Mfg. Co., Montpelier, Vt.

A. Leschen & Sons Rope Co., St. Louis,  
Lidgerwood Mfg. Co., 96 Liberty St.,  
New York.

Northern Engineering Works, Detroit,  
Mich.

F. R. Patch Mfg. Co., Rutland, Vt.

**MERCHANTS.**

Irring Mfg. & Tool Co., 157 Chambers St.,  
New York.

S. Obemayer Co., Cincinnati, O.

**Derricks, Steel—**

American Bridge Co. of New York, 30  
Church St., New York.

Interstate Engineering Co., Bedford, O.

**Desk Slides—**

(See Slides, Desk.)

**Desk Specialties, Silver and****Silver Plated (Inkstands,****Calendars, Pen Wipers,****Paper Files, &c.)—**

International Silver Co., Meriden, Ct.

**Diamond Emery Wheel****Dressers—**

(See Dressers, Emery Wheel.)

**Diamond Points—**

(See Points.)

**Diamond Tools—**

(See Tools, Diamond.)

**Diamonds, Black—**

J. L. Osgood, Buffalo, N. Y.

**Diamonds, Glassers'—**

(See Cutters, Glass, Diamond.)

**Diaphragms, Leather—**

Graton & Knight Mfg. Co., Worcester,  
Mass.

**Diaphragms, Phosphor****Bronze—**

N. Y. Washer & Gasket Co., Brooklyn,  
N. Y.

U. S. Indestructible Gasket Co., 50  
Church St., New York.

**Diaphragms, Rubber—**

New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Die Blocks—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
Colonial Steel Co., Pittsburgh, Pa.

Crucible Steel Casting Co., Lansdowne,  
Pa.

Heppenstall Forge & Knife Co., Pitts-  
burgh, Pa.

Lebanon Steel Casting Co., Lebanon, Pa.  
Pennsylvania Forge Co., Philadelphia, Pa.

Philadelphia Roll & Machine Co., 23d St.  
& Washington Ave., Philadelphia, Pa.

Pratt & Whitney Co., Hartford, Ct.  
Tindel-Morris Co., Eddystone, Pa.

A. P. Wittman & Co., 1223 Spring St.,  
Philadelphia, Pa.

**Die Heads, Screw Cutting—**

Acme Machinery Co., Cleveland, O.  
Geometric Tool Co., New Haven, Ct.  
Jones & Lamson Machine Co., Spring-  
field, Vt.

National Machinery Co., Tiffin, O.

Pratt & Whitney Co., Hartford, Ct.

**Die Holders, for Screw Ma-**

**chines—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

**Die Holders, Plate—**

(See Holders, Plates.)

**Die Sinkers—**

Adriance Machine Works, Brooklyn, N. Y.  
American Tube & Stamping Co., Bridge-  
port, Ct.

Billings & Spencer Co., Hartford, Ct.

Blake & Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Bossert Electric Construction Co., Utica,  
N. Y.

E. D. Clapp Mfg. Co., Auburn, N. Y.

H. C. Cook & Co., Ansonia, Ct.

Eastern Machine & Stamping Co., Provi-  
dence, R. I.

Excelsior Tool & Machine Co., East St.  
Louis, Ill.

Ferracute Machine Co., Bridgeton, N. J.  
Globe Machine & Stamping Co., Cleve-  
land, O.

Hay-Budden Mfg. Co., Brooklyn, N. Y.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Irrington Mfg. Co., Irvington, N. J.

John R. Keim Mills, Inc., Buffalo, N. Y.

Kilborn & Bishop Co., New Haven, Ct.

W. B. Knight Machinery Co., St. Louis,  
Mo.

E. Konigslow Stamping & Tool Works,  
Cleveland, O.

Otto Konigslow Mfg. Co., Cleveland, O.

Chas. Leffler & Co., Brooklyn, N. Y.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

New Castle Forge & Bolt Co., New  
Castle, Pa.

Niagara Machine & Tool Works, Buffalo,  
N. Y.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

O. K. Tool Holder Co., Shelton, Ct.  
Pratt & Whitney Co., Hartford, Ct.

Richard Mfg. Co., Bloomington, Pa.  
Schatz Hardware Mfg. Co., Chappaqua,  
New York.

Schwerdtle Stamp Co., Bridgeport, Ct.  
M. I. Smith, Bristol, Ct.

Geo. A. Smith Co., Worcester, Mass.

V. & O. Press Co., Brooklyn, N. Y.

W. & S. Mfg. Co., Worcester, Mass.  
Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

Wheeling Mold & Foundry Co., Wheel-  
ing, W. Va.

Zeh & Hahnemann Co., Newark, N. J.

**Die Sinkers' Vises—**

(See Vises, Die Sinkers'.)

**Die Sinking—**

(See Die Sinkers.)

**Die Sinking Machines—**

Newton Machine Tool Works, 23d & Vine  
Sta., Philadelphia, Pa.

**Die Stocks, Adjustable—**

Bignall & Keeler Mfg. Co., Edwardsville,  
Ill.

Butterfield & Co., Derby Line, Vt.  
J. M. Carpenter Tap & Die Co., Pawtucket, R. I.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Dies, Stocks, Ratchet—**  
Pratt & Whitney Co., Hartford, Ct.  
Walworth Mfg. Co., Boston, Mass.

**Dies, Adjustable—**  
Adriance Machine Works, Brooklyn, N. Y.  
Butterfield & Co., Derby Line, Vt.

J. M. Carpenter Tap & Die Co., Pawtucket, R. I.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Wells Bros. Co., Greenfield, Mass.  
Zeh & Hahnemann Co., Newark, N. J.

**Dies, Adjustable, Expanding—**

Acme Machinery Co., Cleveland, O.  
Adriance Machine Works, Brooklyn, N. Y.

E. W. Bliss Co., Brooklyn, N. Y.  
J. M. Carpenter Tap & Die Co., Pawtucket, R. I.

Ferracute Machine Co., Bridgeton, N. J.  
Hartford Machine Screw Co., Hartford, Ct.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Landis Machine Co., Waynesboro, Pa.  
Frank Mossberg Co., Attleboro, Mass.

National Machinery Co., Tiffin, O.  
Pratt & Whitney Co., Hartford, Ct.

E. F. Reece Co., Greenfield, Mass.  
D. Saunders' Sons, Yonkers, N. Y.

Wells Bros. Co., Greenfield, Mass.  
Wiley & Russell Mfg. Co., Greenfield, Mass.

Zeh & Hahnemann Co., Newark, N. J.

**Dies and Stamps, Steel—**  
(See Stamps and Dies, Steel.)

**Dies and Taps—**  
(See Stocks, Taps and Dies.)

**Dies, Automatic—**  
Adriance Machine Works, Brooklyn, N. Y.

Baird Machine Co., Oakville, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.

Ferracute Machine Co., Bridgeton, N. J.  
Geometric Tool Co., New Haven, Ct.

Globe Machine & Stamping Co., Cleveland, O.

Hartford Machine Screw Co., Hartford, Ct.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Jones & Lamson Machine Co., Springfield, Vt.

E. Konigslow Stamping & Tool Works, Cleveland, O.

Chas. Leffler & Co., Brooklyn, N. Y.  
Frank Mossberg Co., Attleboro, Mass.

Fred J. Swaine Co., St. Louis, Mo.  
V. & O. Press Co., Brooklyn, N. Y.

Zeh & Hahnemann Co., Newark, N. J.

**Dies, Blanking—**  
E. W. Bliss Co., Brooklyn, N. Y.

**Dies, Can Makers—**  
E. W. Bliss Co., Brooklyn, N. Y.

**Dies, Chilled Cast Wire—**  
Philadelphia Roll & Machine Co., 23d St., & Washington Ave., Philadelphia.

**Dies, Cutting—**  
Adriance Machine Works, Brooklyn, N. Y.

Advance Mfg. Co., Racine Junction, Wis.  
Baird Machine Co., Oakville, Ct.

Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.

Butterfield & Co., Derby Line, Vt.  
J. M. Carpenter Tap & Die Co., Pawtucket, R. I.

Cleveland Punch & Shear Works Co., Cleveland, O.

Consolidated Press & Tool Co., Hastings, Mich.

Ferracute Machine Co., Bridgeton, N. J.  
Gem Mfg. Co., Pittsburgh, Pa.

Globe Machine & Stamping Co., Cleveland, O.

Hartford Machine Screw Co., Hartford, Ct.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Hilles & Jones Co., Wilmington, Del.  
Hoggson & Pettis Mfg. Co., New Haven, Ct.

Kilborn & Bishop Co., New Haven, Ct.  
W. B. Knight Machinery Co., St. Louis, Mo.

E. Konigslow Stamping & Tool Works, Cleveland, O.

Otto Konigslow Mfg. Co., Cleveland, O.  
Chas. Leffler & Co., Brooklyn, N. Y.

Frank Mossberg Co., Attleboro, Mass.  
Niagara Machine & Tool Works, Buffalo, N. Y.

Pratt & Whitney Co., Hartford, Ct.  
E. F. Reece, Greenfield, Mass.

Richard Mfg. Co., Bloomsburg, Pa.  
Schatz Mfg. Co., Chappaqua, N. Y.

Standard Tool Co., Cleveland, O.  
Fred J. Swaine Co., Brooklyn, N. Y.

V. & O. Press Co., Brooklyn, N. Y.  
W. & S. Mfg. Co., Worcester, Mass.

Webster & Perks Tool Co., Springfield, O.  
Wells Bros. Co., Greenfield, Mass.

Wiley & Russell Mfg. Co., Greenfield, Mass.

Zeh & Hahnemann Co., Newark, N. J.

**Dies, Drop Forging—**  
E. W. Bliss Co., Brooklyn, N. Y.

Irrington Mfg. Co., Irrington, N. J.  
New Castle Forge & Bolt Co., New Castle, Pa.

**Dies, Embossing—**  
(See Stamps and Dies, Steel.)

**Dies for Metal Ceiling Work—**

E. W. Bliss Co., Brooklyn, N. Y.  
Ferracute Machine Co., Bridgeton, N. J.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
Zeh & Hahnemann Co., Newark, N. J.

**Dies, Forming—**  
E. W. Bliss Co., Brooklyn, N. Y.

**Dies, Opening—**  
Acme Machinery Co., Cleveland, O.

Butterfield & Co., Derby Line, Vt.  
Geometric Tool Co., New Haven, Ct.

Hartford Machine Screw Co., Hartford, Ct.  
Landis Machine Co., Waynesboro, Pa.

Pratt & Whitney Co., Hartford, Ct.  
Wells Bros. Co., Greenfield, Mass.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**Dies, Pipe—**  
(See Dies, Cutting.)

**Dies, Pump Rod—**  
Wells Bros. Co., Greenfield, Mass.

**Dies, Punching—**  
Adriance Machine Works, Brooklyn, N. Y.

Advance Mfg. Co., Racine Junction, Wis.  
Badger State Machine Co., Janesville, Wis.

Baird Machine Co., Oakville, Ct.

Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Cleveland Punch & Shear Works Co.,  
Cleveland, O.  
Consolidated Press & Tool Co., Hastings,  
Mich.

Ferracute Machine Co., Bridgeton, N. J.  
Gem Mfg. Co., Pittsburgh, Pa.  
Globe Machine & Stamping Co., Cleve-  
land, O.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
Kilborn & Bishop Co., New Haven, Ct.  
E. Konigslow Stamping & Tool Works  
Cleveland, O.

Otto Konigslow Mfg. Co., Cleveland, O.  
Chas. Leffler & Co., Brooklyn, N. Y.  
McCabe Hanger Mfg. Co., 425-427 W. 25th  
St., New York.

Frank Mossberg Co., Attleboro, Mass.  
New Doty Mfg. Co., Janesville, Wis.  
New York Washer & Gasket Co., Brook-  
lyn, N. Y.

Niagara Machine & Tool Works, Buffalo,  
N. Y.

George A. Ohl & Co., Newark, N. J.  
Robinson Tool Works, Waterbury, Ct.  
Schatz Mfg. Co., Chappaqua, N. Y.  
Geo. A. Smith Co., Worcester, Mass.  
Fred J. Swaine Co., St. Louis, Mo.  
V. & O. Press Co., Brooklyn, N. Y.  
W. & S. Mfg. Co., Worcester, Mass.  
Waltham Machine Works, Waltham, Mass.  
Zeh & Hahnemann Co., Newark, N. J.

**Dies, Round Blanking—**  
(See Dies, Sheet Metal Working.)

**Dies, Screw Plate—**  
(See Stocks, Taps and Dies.)

**Dies, Self Opening—**  
Acme Machinery Co., Cleveland, O.  
Hartford Machine Screw Co., Hartford,  
Ct.

Landis Machine Co., Waynesboro, Pa.  
National Machinery Co., Tiffin, O.

**Dies, Sheet Metal Working—**  
Adriance Machine Works, Brooklyn, N. Y.  
Advance Mfg. Co., Racine Junction, Wis.  
Badger State Machine Co., Janesville,  
Wis.

Baird Machine Co., Oakville, Ct.  
Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Bossert Electric Construction Co., Utica,  
N. Y.

Cleveland Punch & Shear Works Co.,  
Cleveland, O.  
Consolidated Press & Tool Co., Hastings,  
Mich.

Ferracute Machine Co., Bridgeton, N. J.  
Gem Mfg. Co., Pittsburgh, Pa.  
Globe Machine & Stamping Co., Cleve-  
land, O.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
Kilborn & Bishop Co., New Haven, Ct.  
E. Konigslow Stamping & Tool Works,  
Cleveland, O.

Otto Konigslow Mfg. Co., Cleveland, O.  
Chas. Leffler & Co., Brooklyn, N. Y.  
McCabe Hanger Mfg. Co., 425-427 W. 25th  
St., New York.

Frank Mossberg Co., Attleboro, Mass.  
Geo. M. Ness, Jr., 61 Fulton St., N. Y.  
New York Washer & Gasket Co., Brook-  
lyn, N. Y.

Niagara Machine & Tool Works, Buffalo,  
N. Y.

Northwestern Consolidated Iron & Steel  
Mfg. Co., Burlington, Ia.

Geo. A. Ohl & Co., Newark, N. J.  
Schatz Mfg. Co., Chappaqua, N. Y.  
Fred J. Swaine Co., St. Louis, Mo.

U. S. Indestructible Gasket Co., 50  
Church St., New York.  
V. & O. Press Co., Brooklyn, N. Y.  
W. & S. Mfg. Co., Worcester, Mass.  
Worcester Pressed Steel Co., Worcester,  
Mass.

Zeh & Hahnemann Co., Newark, N. J.

**Dies, Shipyard—**  
(See Punches and Dies.)

**Dies, Solid Bolt—**  
Butterfield & Co., Derby Line, Vt.  
J. M. Carpenter Tap & Die Co., Paw-  
tucket, R. I.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.  
Morse Twist Drill & Machine Co., New  
Bedford, Mass.

Standard Tool Co., Cleveland, O.  
Wells Bros. Co., Greenfield, Mass.  
Wiley & Russell Mfg. Co., Greenfield,  
Mass.

**Dies, Solid Pipe—**  
Butterfield & Co., Derby Line, Vt.  
J. M. Carpenter Tap & Die Co., Paw-  
tucket, R. I.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.  
Morse Twist Drill & Machine Co., New  
Bedford, Mass.

Pratt & Whitney Co., Hartford, Ct.  
D. Saunders' Sons, Yonkers, N. Y.  
Standard Tool Co., Cleveland, O.

Walworth Mfg. Co., Boston, Mass.  
Wells Bros. Co., Greenfield, Mass.  
F. E. Wells & Sons Co., Greenfield,  
Mass.

**Dies, Stamping—**  
Adriance Machine Works, Brooklyn, N. Y.  
Avery Stamping Co., Cleveland, O.  
Baird Machine Co., Oakville, Ct.

Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Bossert Electric Construction Co., Utica,  
N. Y.

Consolidated Press & Tool Co., Hastings,  
Mich.  
H. C. Cook & Co., Ansonia, Ct.

Ferracute Machine Co., Bridgeton, N. J.  
Gem Mfg. Co., Pittsburgh, Pa.  
Globe Machine & Stamping Co., Cleve-  
land, O.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
Irrving Mfg. Co., Irvington, N. J.  
Kilborn & Bishop Co., New Haven, Ct.

E. Konigslow Stamping & Tool Works,  
Cleveland, O.  
Otto Konigslow Mfg. Co., Cleveland, O.

Chas. Leffler & Co., Brooklyn, N. Y.  
Frank Mossberg Co., Attleboro, Mass.  
Niagara Machine & Tool Works, Buffalo,  
N. Y.

Philadelphia Roll & Machine Co., 23d St.  
and Washington Ave., Philadelphia, Pa.  
Richard Mfg. Co., Bloomsburg, Pa.

Schatz Mfg. Co., Chappaqua, N. Y.  
Geo. A. Smith Co., Worcester, Mass.  
Fred J. Swaine Co., St. Louis, Mo.  
V. & O. Press Co., Brooklyn, N. Y.  
W. & S. Mfg. Co., Worcester, Mass.

**Worcester Pressed Steel Co., Worcester, Mass.**

**Zeh & Hahnemann Co., Newark, N. J.**

**Dies, Stencil Cutting—**  
Geo. M. Ness, Jr., 61 Fulton St., N. Y.  
Schwerdtle Stamp Co., Bridgeport, Ct.

**Dies, Sub-Press—**  
E. W. Bliss Co., Brooklyn, N. Y.  
Waltham Machine Works, Waltham, Mass.

**Dies, Thread Cutting—**  
(See Stocks, Taps, Dies.)

**Dies, Welding—**  
P. F. Burke, Boston, Mass.

**Dies, Wiring—**  
E. W. Bliss Co., Brooklyn, N. Y.  
Ferracute Machine Co., Bridgeton, N. J.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
E. Konigsloew Stamping & Tool Works, Cleveland, O.

**Otto Konigsloew Mfg. Co., Cleveland, O.**  
**Differential Pulley Blocks—**  
(See Blocks, Differential Pulley.)

**Digesters, Pulp—**  
American Welding Co., Carbondale, Pa.  
Petroleum Iron Works Co., Sharon, Pa.  
Riter-Conley Mfg. Co., Pittsburgh, Pa.  
Tudor Boiler Mfg. Co., Cincinnati, O.

**Diggers, Peanut—**  
Bateman Mfg. Co., Grenloch, N. J.  
**Diggers, Post Hole—**  
Avery Stamping Co., Cleveland, O.  
Henry Diston & Sons, Philadelphia, Pa.  
Hubbard & Co., Pittsburgh, Pa.  
Iwan Bros., South Bend, Ind.  
F. E. Kohler & Co., Canton, O.  
Oliver Iron & Steel Co., Pittsburgh, Pa.  
Osmundson Spade Mfg. Co., Perry, Ia.  
(See also Augers, Post Hole.)

**Diggers, Potato—**  
American Fork & Hoe Co., Cleveland, O.  
Bateman Mfg. Co., Grenloch, N. J.  
Keystone Farm Machine Co., York, Pa.

**Dimension Gauges—**  
(See Gauges, Dimension.)

**Dinner Casters—**  
(See Casters, Silver Plated.)

**Dippers and Skimmers, Lard—**

Sturges & Burn Mfg. Co., Chicago, Ill.

**Dippers, Combination—**  
Lasher Mfg. Co., Davenport, Ia.

**Dippers, Egg and Vegetable—**

Fred J. Meyers Mfg. Co., Hamilton, O.

**Dippers, Melted Metal—**  
W. J. Clark Co., Salem, O.

**Disc Notching Machines—**  
(See Notching Machines, Armature Disc.)

**Disc Slotting Machines—**  
(See Slotting Machines, Automatic Disc.)

**Discs, Armature—**  
Avery Stamping Co., Cleveland, O.  
Crocker-Wheeler Co., Ampere, N. J.  
Hendrick Mfg. Co., Carbondale, Pa.  
Otto Konigsloew Mfg. Co., Cleveland, O.  
National Tube Co., Pittsburgh, Pa.  
W. & S. Mfg. Co., Worcester, Mass.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
Worcester Pressed Steel Co., Worcester, Mass.

**Discs, Asbestos, Fibre, Leather—**

New York Washer & Gasket Co., Brooklyn, N. Y.

**Discs, Bronze—**

New York Washer & Gasket Co., Brooklyn, N. Y.

U. S. Indestructible Gasket Co., 50 Church St., New York.

**Discs, Copper—**

New York Washer & Gasket Co., Brooklyn, N. Y.

U. S. Indestructible Gasket Co., 50 Church St., New York.

**Discs for Grinders—**

Gardner Machine Co., Beloit, Wis.

**Discs, Hot or Cold Iron Cutting—**

Henry Diston & Sons, Philadelphia, Pa.

**Discs, Lead—**

New York Washer & Gasket Co., Brooklyn, N. Y.

U. S. Indestructible Gasket Co., 50 Church St., New York.

**Discs, Phosphor-Bronze—**  
Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

**Discs, Rubber—**  
(See Gaskets and Rings, Rubber.)

**Discs, Standard Reference—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

**Discs, Steel—**

Allegheny Forging Co., Pittsburgh, Pa.  
W. J. Clark Co., Salem, O.

New York Washer & Gasket Co., Brooklyn, N. Y.

U. S. Indestructible Gasket Co., 50 Church St., New York.

W. & S. Mfg. Co., Worcester, Mass.

Worcester Pressed Steel Co., Worcester, Mass.

**Discs, Valve—**

Indestructible Metal Co., 50 Church St., New York.

Jenkins Bros., 71 John St., New York.

Lunkenheimer Co., Cincinnati, O.

New York Belting & Packing Co., 91-93 Chambers St., New York.

New York Washer & Gasket Co., Brooklyn, N. Y.

U. S. Indestructible Gasket Co., 50 Church St., New York.

Walworth Mfg. Co., Boston, Mass.

**Dish Drainers—**  
(See Drainers, Kitchen Articles.)

**Dishers, Ice Cream—**

Erie Specialty Co., Erie, Pa.

**Dishes, Baking—**

New York Stamping Co., Brooklyn, N. Y.

**Dishes, Berry, Bon Bon, Butter, Fruit, Meat, &c., Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Dishes, Butter, Wooded—**  
Richmond Cedar Works, Richmond, Va.

**Dishes, Chafin—**

Goodwin & Kintz Co., Winsted, Ct.

International Silver Co., Meriden, Ct.

Lalance & Grosjean Mfg. Co., 299 Broadway, New York.

Landers, Frary & Clark, New Britain, Ct.

New York Stamping Co., Brooklyn, N. Y.

**Dishes, Chafin, Electric—**  
General Electric Co., Schenectady, N. Y.

**Dishes, Fern, Silver Plated—**  
International Silver Co., Meriden, Ct.

**Dishes, Soap—**

Columbia Grey Iron Co., Columbia, Pa.  
Reading Hardware Co., Reading, Pa.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Dispensers, Factory—**

Delphos Mfg. Co., Delphos, O.

**Dispensers, Liquid Soap—**

Charles Morrill, 27 Broadway, New York.

**Distilling Apparatus—**

E. B. Badger & Sons Co., Boston, Mass.

**Divider Pencil Attachments—**

(See Pencil Attachments, Divider.)

**Dividers, Angle—**

Stanley Rule & Level Co., New Britain, Ct.

**Dividers, Compasses, &c.—**

(See Compasses, Dividers, &c.)

**Dividing Heads—**

(See Heads, Dividing, Indexing.)

**Dock Spikes—**

(See Spikes, Dock, Wharf, &c.)

**Dog Collis, Chain—**

(See Collis, Chain.)

**Dog Furnishings—**

Union Hardware Co., Torrington, Ct.

Wire Goods Co., Worcester, Mass.

**Dogs, Bolt—**

Wm. G. Le Count, East Norwalk, Ct.

**Dogs, Clamp—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.

Wm. G. Le Count, East Norwalk, Ct.

**Dogs, Lathe—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

Chas. H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.

Wm. G. Le Count, East Norwalk, Ct.

Niles-Bement-Pond Co., 111 Broadway, New York.

O. K. Tool Holder Co., Shelton, Ct.

Richmond Forgings Corporation, Richmond, Va.

Western Tool & Mfg. Co., Springfield, O.

J. H. Williams & Co., Brooklyn, N. Y.

**Dogs, Milling Machine—**

J. H. Williams & Co., Brooklyn, N. Y.

**Dogs, Pinch—**

Cleveland Galvanizing Works Co., Cleveland, O.

**Dogs, Ring and Chain—**

New Castle Forge & Bolt Co., New Castle, Pa.

Standard Chain Co., Pittsburgh, Pa.

Trow & Holden, Barre, Vt.

**Dogs, Saw Mill—**

E. C. Atkins & Co., Indianapolis, Ind.

Soule Steam Feed Works, Meridian, Miss.

**Dokies, Timber—**

Boston & Lockport Block Co., East Boston, Mass.

Peter Gerlach Co., Cleveland, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

W. W. Patterson Co., Pittsburgh, Pa.

Soule Steam Feed Works, Meridian, Miss.

Standard Scale & Supply Co., Pittsburgh.

**Dolly Outfits for Trace and**

**Coil Welded Chain—**

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Domes for Observatories—**

W. N. Kratzer & Co., Pittsburgh, Pa.

**Door Bell Handles—**

(See Handles, Door Bell.)

**Door Bells, Bolts, Checks, &c.—**

(See Bells, Bolts, Checks, &c.)

**Door Guards—**

(See Fasteners, Chain Door.)

**Door Mats, Wire and Steel—**

(See Mats, Wire and Steel.)

**Door Plates—**

(See Plates, Door.)

**Doors and Gates, Cemetery Vault—**

Fred J. Meyers Mfg. Co., Hamilton, O.

**Doors and Shutters, Iron and Steel—**

Anchor Post Iron Works, 27 Cortlandt St., New York.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Forest City Steel & Iron Co., Cleveland.

Glen Mfg. Co., Ellwood City, Pa.

M. Lanz & Sons, Pittsburgh, Pa.

Fred J. Meyers Mfg. Co., Hamilton, O.

George A. Ohl & Co., Newark, N. J.

Stewart Iron Works Co., Cincinnati, O.

Van Dorn Iron Works Co., Cleveland, O.

**Doors, Ash Pit—**

(See Iron Work, Builders.)

**Doors, Automatic Hatch—**

Warsaw Elevator Co., Warsaw, N. Y.

**Doors, Bronze—**

Glen Mfg. Co., Ellwood City, Pa.

W. S. Tyler Co., Cleveland, O.

**Doors, Cellar or Trap—**

Fred J. Meyers Mfg. Co., Hamilton, O.

**Doors, Core Oven—**

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

**Doors, Screen—**

Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

**Doors, Screen, to order—**

Phoenix Mfg. Co., Milwaukee, Wis.

**Doors, Vault—**

(See Vaults, Fire and Burglar Proof.)

**Doors, Wire and Iron—**

Buffalo Wire Works Co., Inc., Buffalo, N. Y.

Fred J. Meyers Mfg. Co., Hamilton, O.

W. S. Tyler Co., Cleveland, O.

**Dormant Scales—**

(See Scales, Dormant.)

**Double Pointed Tacks—**

(See Tacks, Double Pointed.)

**Doubling Machines—**

United Engineering & Foundry Co., Pittsburgh, Pa.

**Dovetailing Machines—**

Advance Machinery Co., Toledo, O.

**Dowel Pins and Screws—**

(See Pins, Dowel.)

**Dowel Tools—**

(See Tools, Dowel, Pin, &c.)

**Dowelling Machines—**

Gondell-Pratt Co., Greenfield, Mass.

**Dowels—**

Cleveland Galvanizing Works Co., Cleveland, O.

W. R. Hartigan, Collinsville, Ct.

Mathew Lanz & Sons, Pittsburgh, Pa.

Oliver Machinery Co., Grand Rapids, Mich.

**Parker Wire Goods Co.**, Worcester, Mass.  
H. A. Stiles & Co., Boston, Mass.  
Wire Goods Co., Worcester, Mass.

**Dowels, Hand Rail—**  
(See Screws, Hand Rail.)

**Dowel, Trunk—**  
J. H. Sessions & Son, Bristol, Ct.  
**Draft, Forced and Induced.**

**Apparatus—**  
American Blower Co., Detroit, Mich.  
Boston Blower Co., Hyde Park, Mass.  
Buffalo Forge Co., Buffalo, N. Y.  
Green Fuel Economizer Co., Matteawan, N. Y.

B. F. Sturtevant Co., Boston, Mass.  
**Draft, Mechanical Plants for—**

American Blower Co., Detroit, Mich.  
Boston Blower Co., Hyde Park, Mass.  
Buffalo Forge Co., Buffalo, N. Y.  
Exeter Machine Works, Exeter, N. H.  
Green Fuel Economizer Co., Matteawan, N. Y.

B. F. Sturtevant Co., Boston, Mass.  
**Draft Rigging—**  
American Steel Foundries, 42 Broadway, New York.

**Drafting, Mechanical—**  
Joseph Merritt, Hartford, Ct.

**Drafting Room Furniture—**  
(See Furniture, Drafting Room.)

**Draftsman's Scales—**  
(See Scales, Draftsman's.)

**Draftsman's Supplies—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Draftsman's Tools—**  
(See Instruments, Drawing.)

**Drag Saws—**  
(See Saws, Mill, Mulay, &c.)

**Drain and Ditching Spades—**  
(See Shovels and Spades, Tiling or Ditching.)

**Drainers, Dish—**  
Andrews Wire & Iron Works, Rockford, Ill.

Kilbourne Mfg. Co., Troy, N. Y.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Parker Wire Goods Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.

**Draw Bench Products—**  
Boston Pressed Metal Co., Worcester, Mass.

**Draw Benches—**  
W. J. Clark Co., Salem, O.  
Falls River & Machine Co., Cuyahoga Falls, O.

Gould & Eberhardt, Newark, N. J.  
Morgan Construction Co., Worcester, Mass.

George A. Ohl & Co., Newark, N. J.  
Richard Mfg. Co., Bloomsburg, Pa.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
Watson-Stillman Co., 50 Church St., N. Y.

Wright Wire Co., Worcester, Mass.

**Draw Benches, Continuous—**  
Morgan Construction Co., Worcester, Mass.

**Draw Benches, Hydraulic—**  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

Watson-Stillman Co., 50 Church St., N. Y.

**Drawer Handles, Knobs, Pulls—**  
(See Handles, Knobs, Pulls.)

**Drawers, Bench—**  
New Britain Machine Co., New Britain, Ct.

**Drawers, Shelf—**  
(See Boxes, Shelf.)

**Drawheads, Car—**  
Atlas Car & Mfg. Co., Cleveland, O.

**Drawing Knives—**  
(See Knives, Drawing.)

**Drawing Machinery, Wire—**  
(See Draw Benches.)

**Drawing Materials—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Dredging Machinery—**  
Broderick & Bascom Rope Co., St. Louis.

A. Leschen & Sons Rope Co., St. Louis.  
Taylor Iron & Steel Co., High Bridge, N. J.

Vulcan Iron Works, 28 No. Irving, Ave., Chicago, Ill.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**Dressers, Diamond—**  
J. L. Osgood, Buffalo, N. Y.

**Dressers, Emery Wheel—**  
Abrasive Material Co., Philadelphia, Pa.

American Emery Wheel Works, Providence, R. I.

E. C. Atkins & Co., Indianapolis, Ind.  
Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

Builders' Iron Foundry, Providence, R. I.  
George H. Calder, Lancaster, Pa.

Chicago Screw Co., 2 No. Canal St., Chicago, Ill.

Diamond Machine Co., Providence, R. I.  
Diamond Saw & Stamping Works, Buffalo, N. Y.

N. E. Dickinson, 47 Maiden Lane, N. Y.  
Thos. L. Dickinson, 64 Nassau St., N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Northampton Emery Wheel Co., Leeds, Mass.

J. L. Osgood, Buffalo, N. Y.  
Standard Tool Co., Cleveland, O.

Sterling Emery Wheel Mfg. Co., Tiffin, O.  
Vitrified Wheel Co., Westfield, Mass.

Worcester Pressed Steel Co., Worcester, Mass.

Zucker & Levett & Loeb Co., 526-530 W. 25th St., New York.

**Dressers, Pneumatic Stone—**  
E. W. Bliss Co., Brooklyn, N. Y.

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

**Dressing, Carriage Top—**  
Carpenter-Morton Co., Boston, Mass.

Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Dressing, Razor Strip—**  
Arcade Mfg. Co., Freeport, Ill.

**Dressing, Rope—**  
Broderick & Bascom Rope Co., St. Louis.

Dodge Mfg. Co., Mishawaka, Ind.  
C. W. Hunt Co., West New Brighton, N. Y.

A. Leschen & Sons Rope Co., St. Louis.

**Drill and Clamp Combined—**  
(See Clamp and Drill, Combined.)

**Drill, Anvil and Vise—**  
(See Vise, Drill and Anvil.)



**Drill Attachments, Force Feed—**

(See Drills, Chain.)

**Drill Attachments, Vise—**

Goodell-Pratt Co., Greenfield, Mass.

Prentiss Vise Co., 41 Barclay St., N. Y.

**Drill Cases, Chucks, &c.—**

(See Cases, Chucks, &amp;c.)

**Drill Drifts, Automatic—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

**Drill, Fertilizer, Hand—**

Bateman Mfg. Co., Grenloch, N. J.

**Drill Grinding Machines, Butt—**

(See Milling and Drilling Machines.)

**Drill Grinding Machines, Twist—**

(See Grinders, Drill.)

**Drill Sockets—**

(See Sockets, Drill.)

**Drilling and Milling Machines, Combined—**

W. B. Knight Machinery Co., St. Louis, Mo.

Lapointe Machine Tool Co., Hudson, Mass.

Lucas Machine Tool Co., Cleveland, O.

**Drilling Machines—**

MECHANICAL

Baird Machinery Co., Pittsburgh, Pa.

W. R. Beatty Machinery &amp; Equipment Co., Pittsburgh, Pa.

Carlin Machinery &amp; Supply Co., Inc., N. S. Pittsburgh, Pa.

Thos. P. Conard &amp; Co., 119 S. 4th St., Philadelphia, Pa.

Hannan-Finton Co., Springfield, Mass.

Hill, Clarke &amp; Co., Boston, Mass.

W. C. Johnson &amp; Sons Machinery Co., St. Louis, Mo.

J. J. McCabe, 14 Dey St., New York.

McDowell &amp; Co., Allegheny, Pa.

McDowell, Stocker &amp; Co., 59 S. Canal St., Chicago, Ill.

Manning, Maxwell &amp; Moore, Inc., 85-89 Liberty St., New York.

Marshall &amp; Hushart Machinery Co., 62-64 So. Canal St., Chicago, Ill.

Edgar M. Moore &amp; Co., Pittsburgh, Pa.

Motch and Merryweather Machinery Co., Cleveland, O.

S. Obermayer Co., Cincinnati, O.

Prentiss Tool &amp; Supply Co., 115 Liberty St., New York.

Joseph T. Ryerson &amp; Son, 18-22 Milwaukee Ave., Chicago, Ill.

F. P. Schlelein Machinery Co., Pittsburgh, Pa.

Scully Steel &amp; Iron Co., Halsted and Wayman Sts., Chicago, Ill.

L. F. Seifert's Sons, Inc., 437-441 N. 3d St., Philadelphia, Pa.

H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.

Taylor Machinery Co., Boston, Mass.

Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.

Jacob Ullman, Buffalo, N. Y.

Vandeyck-Churchill Co., 8 Dey St., N. Y.

A. O. Walworth &amp; Co., 143-147 Clinton St., Chicago, Ill.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

**Drilling Machines, Adjustable Head—**

Taylor &amp; Fenn Co., Hartford, Ct.

**Drilling Machines, Arch Bar—**

Cincinnati-Bickford Tool Co., Cincinnati, O.

Wm. Gardam &amp; Son, 221 Fulton St., N. Y.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

Newton Machine Tool Works, Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

**Drilling Machines, Automatic Cam Feed—**

Taylor &amp; Fenn Co., Hartford, Ct.

**Drilling Machines, Automatic Stop—**

American Tool Works Co., Cincinnati, O.

W. F. &amp; John Barnes Co., Rockford, Ill.

Cincinnati-Bickford Tool Co., Cincinnati, O.

W. P. Davis Machine Co., Rochester, N. Y.

Wm. Gardam &amp; Son, 221 Fulton St., N. Y.

Garvin Machine Co., Spring and Varick Sts., New York.

E. Harrington, Son &amp; Co., Philadelphia, Pa.

Henry &amp; Wright Mfg. Co., Hartford, Ct.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

New Haven Mfg. Co., New Haven, Ct.

Niles-Bement-Pond Co., 111 Broadway, New York.

Francis Reed Co., Worcester, Mass.

Sibley Machine Tool Co., South Bend, Ind.

Silver Mfg. Co., Salem, O.

Taylor &amp; Fenn Co., Hartford, Ct.

**Drilling Machines, Ball Bearing—**

Buffalo Forge Co., Buffalo, N. Y.

Henry &amp; Wright Mfg. Co., Hartford, Ct.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

**Drilling Machines, Bench—**

Cincinnati Electrical Tool Co., Cincinnati, O.

Jas. Clark, Jr., Electric Co., Louisville, Ky.

Wm. Gardam &amp; Son, Inc., 221 Fulton St., New York.

Garvin Machine Co., Spring &amp; Varick Sts., New York.

Goodell-Pratt Co., Greenfield, Mass.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

Millers Falls Co., 28 Warren St., N. Y.

National Machine Co., Hartford, Ct.

Pratt &amp; Whitney Co., Hartford, Ct.

Francis Reed Co., Worcester, Mass.

Rockford Drilling Machine Co., Rockford, Ill.

Sigourney Tool Co., Hartford, Ct.

Silver Mfg. Co., Salem, O.

Taylor Machinery Co., Boston, Mass.

United States Electrical Tool Co., Cincinnati, O.

**Drilling Machines, Bicycle Hub—**

American Tool Works Co., Cincinnati, O.

Champion Blower & Forge Co., Lancaster, Pa.  
Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
Hoefler Mfg. Co., Freeport, Ill.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Stow Flexible Shaft Co., Philadelphia, Pa.

**Drilling Machines. Bicycle Rim—**

American Tool Works Co., Cincinnati, O.  
Champion Blower & Forge Co., Lancaster, Pa.  
Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
Henry & Wright Mfg. Co., Hartford, Ct.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Drilling Machines. Blacksmiths—**

Buffalo Forge Co., Buffalo, N.Y.  
Champion Blower & Forge Co., Lancaster, Pa.  
Cincinnati-Bickford Tool Co., Cincinnati, O.  
Garvin Machine Co., Spring and Varick Sts., New York.  
E. Harrington, Son & Co., Philadelphia, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
B. B. Noyes & Co., Greenfield, Mass.  
Francis Reed Co., Worcester, Mass.  
Silver Mfg. Co., Salem, O.  
Whitman & Barnes Mfg. Co., Chicago.  
Wiley & Russell Mfg. Co., Greenfield, Mass.

**Drilling Machines. Boiler Shell—**

American Tool Works Co., Cincinnati, O.  
Bethlehem Steel Co., Bethlehem, Pa.  
Cincinnati-Bickford Tool Co., Cincinnati, O.  
Detrick & Harvey Machine Co., Baltimore, Md.  
Ingersoll-Rand Co., 11 Broadway, New York.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Western Machine Tool Works, Holland, Mich.

**Drilling Machines. Car Wheel—**

American Tool Works Co., Cincinnati, O.  
Cincinnati-Bickford Tool Co., Cincinnati, O.  
Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
E. Harrington, Son & Co., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Drilling Machines. Connecting Rod—**

American Tool Works Co., Cincinnati, O.  
Wm. Gardam & Son, 221 Fulton St., N.Y.

Garvin Machine Co., Spring and Varick Sts., New York.  
E. Harrington, Son & Co., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Newton Machine Tool Works, Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Drilling Machines. Core Rock—**

Ingersoll-Rand Co., 11 Broadway, N.Y.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

**Drilling Machines. Double Head Travers—**

Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
E. Harrington, Son & Co., Philadelphia, Pa.  
Newton Machine Tool Works, Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Drilling Machines. Electrically Driven—**

American Tool Works Co., Cincinnati, O.  
Bancroft & Co., Philadelphia, Pa.  
W. F. & John Barnes Co., Rockford, Ill.  
Bausch Machine Tool Co., Brighton, Mass.  
Cincinnati-Bickford Tool Co., Cincinnati, O.  
Cincinnati Electrical Tool Co., Cincinnati, O.  
Jos. Clark, Jr., Electric Co., Louisville, Ky.  
Dresser Machine Tool Co., Cincinnati, O.  
Fox Machine Co., Grand Rapids, Mich.  
Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
Gem Mfg. Co., Pittsburgh, Pa.  
General Electric Co., Schenectady, N.Y.  
E. Harrington, Son & Co., Philadelphia, Pa.  
Henry & Wright Mfg. Co., Hartford, Ct.  
Hoefler Mfg. Co., Freeport, Ill.  
Holtzer-Cabot Electric Co., Boston, Mass.  
Jeffrey Mfg. Co., Columbus, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Pawling & Harnischfeger, Milwaukee, Wis.  
Pratt & Whitney Co., Hartford, Ct.  
Francis Reed Co., Worcester, Mass.  
Rockford Drilling Machine Co., Rockford, Ill.  
Sibley Machine Tool Co., South Bend, Ind.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Stow Mfg. Co., Binghamton, N.Y.  
Taylor & Fenn Co., Hartford, Ct.  
Taylor Machinery Co., Boston, Mass.  
United States Electrical Tool Co., Cincinnati, O.  
Washburn Shops, Worcester, Mass.  
Western Machine Tool Works, Holland, Mich.

**Drilling Machines. Geared—**

American Tool Works Co., Cincinnati, O.  
W. F. & John Barnes Co., Rockford, Ill.

Baush Machine Tool Co., Brightwood, Mass.  
 Cincinnati-Bickford Tool Co., Cincinnati, O.  
 W. P. Davis Machine Co., Rochester, N.Y.  
 Dreeses Machine Tool Co., Cincinnati, O.  
 Wm. Gardam & Son, 221 Fulton St., N.Y.  
 Garvin Machine Co., Spring and Varick Sts., New York.  
 Gem Mfg. Co., Pittsburgh, Pa.  
 Goodell-Pratt Co., Greenfield, Mass.  
 E. Harrington, Son & Co., Philadelphia, Pa.

Hoefler Mfg. Co., Freeport, Ill.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Mechanics Machine Co., Rockford, Ill.  
 Millers Falls Co., 28 Warren St., N. Y.  
 New Haven Mfg. Co., New Haven, Ct.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Francis Reed Co., Worcester, Mass.  
 Sibley Machine Tool Co., South Bend, Ind.  
 Silver Mfg. Co., Salem, O.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Western Machine Tool Works, Holland, Mich.

### **Drilling Machines, Gun Barrel—**

Garvin Machine Co., Spring and Varick Sts., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Pratt & Whitney Co., Hartford, Ct.

### **Drilling Machines, High Speed—**

Henry & Wright Mfg. Co., Hartford, Ct.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Taylor & Fenn Co., Hartford, Ct.  
 Western Machine Tool Works, Holland, Mich.

### **Drilling Machines, Horizontal—**

W. F. & John Barnes Co., Rockford, Ill.  
 Baush Machine Tool Co., Brightwood, Mass.  
 Detrick & Harvey Machine Co., Baltimore, Md.  
 Espen-Lucas Machine Works, Philadelphia, Pa.  
 Wm. Gardam & Son, 221 Fulton St., N.Y.  
 Garvin Machine Co., Spring and Varick Sts., New York.  
 Gem Mfg. Co., Pittsburgh, Pa.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Hoefler Mfg. Co., Freeport, Ill.  
 Lucas Machine Tool Co., Cleveland, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Newton Machine Tool Works, Philadelphia, Pa.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Pawling & Harnischfeger, Milwaukee, Wis.  
 Pratt & Whitney Co., Hartford, Ct.  
 Rockford Drilling Machine Co., Rockford, Ill.  
 Wiley & Russell Mfg. Co., Greenfield, Mass.

### **Drilling Machines, Locomotive Frame—**

American Tool Works Co., Cincinnati, O.

Baush Machine Tool Co., Brightwood, Mass.  
 Cincinnati-Bickford Tool Co., Cincinnati, O.  
 Wm. Gardam & Son, 221 Fulton St., N.Y.  
 Gem Mfg. Co., Pittsburgh, Pa.  
 E. Harrington, Son & Co., Inc., Philadelphia, Pa.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.

### **Drilling Machines, Marble—**

American Tool Works Co., Cincinnati, O.  
 Cincinnati Electrical Tool Co., Cincinnati, O.

Wm. Gardam & Son, 221 Fulton St., N.Y.  
 Garvin Machine Co., Spring and Varick Sts., New York.  
 Gem Mfg. Co., Pittsburgh, Pa.  
 E. Harrington, Son & Co., Philadelphia, Pa.

Henry & Wright Mfg. Co., Hartford, Ct.  
 Pratt & Whitney Co., Hartford, Ct.  
 Francis Reed Co., Worcester, Mass.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.  
 United States Electrical Tool Co., Cincinnati, O.

### **Drilling Machines, Mining—**

Jeffrey Mfg. Co., Columbus, O.  
 Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

### **Drilling Machines, Multiple—**

Bancroft & Co., Philadelphia, Pa.  
 W. F. & John Barnes Co., Rockford, Ill.  
 Baush Machine Tool Co., Brightwood, Mass.  
 Cincinnati-Bickford Tool Co., Cincinnati, O.  
 Cincinnati Electrical Tool Co., Cincinnati, O.  
 Jas. Clark, Jr., Electrical Co., Louisville, Ky.

Cleveland Punch & Shear Works Co., Cleveland, O.

Fox Machine Co., Grand Rapids, Mich.  
 Wm. Gardam & Son, 221 Fulton St., N.Y.  
 Garvin Machine Co., Spring and Varick Sts., New York.

E. Harrington, Son & Co., Inc., Philadelphia, Pa.

Henry & Wright Mfg. Co., Hartford, Ct.  
 Hoefler Mfg. Co., Freeport, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Mechanics Machine Co., Rockford, Ill.

National Machine Co., Hartford, Ct.

Newton Machine Tool Works, Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

Francis Reed Co., Worcester, Mass.

Rockford Drilling Machine Co., Rockford, Ill.

Sigourney Tool Co., Hartford, Ct.

Taylor & Fenn Co., Hartford, Ct.

Taylor Machinery Co., Boston, Mass.

Waltham Machine Works, Waltham, Mass.

Washburn Shops, Worcester, Mass.  
Western Machine Tool Works, Holland, Mich.

**Drilling Machines. Oil Well—**

American Well Works, Aurora, Ill.  
Keystone Driller Co., Beaver Falls, Pa.  
Stow Flexible Shaft Co., Philadelphia, Pa.

**Drilling Machines. Overhead Traveling—**

Cincinnati-Bickford Tool Co., Cincinnati, O.

Wm. Gardam & Son, 221 Fulton St., N.Y.  
Gem Mfg. Co., Pittsburgh, Pa.

**Drilling Machines. Pinion—**  
Blake & Johnson Co., Waterbury Ct.

**Drilling Machines. Plug. Pneumatic—**

Helwig Mfg. Co., St. Paul, Minn.

**Drilling Machines. Pneumatic—**

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Clayton Air Compressor Works, 115 Broadway, New York.

Helwig Mfg. Co., St. Paul, Minn.  
Ingersoll-Rand Co., 11 Broadway, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Pittsburgh Pneumatic Co., Canton, O.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

**Drilling Machines. Portable—**

American Tool Works Co., Cincinnati, O.  
Baush Machine Tool Co., Brightwood, Mass.

Buffalo Forge Co., Buffalo, N. Y.  
Champion Blower & Forge Co., Lancaster, Pa.

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Cincinnati-Bickford Tool Co., Cincinnati, O.

Cincinnati Electrical Tool Co., Cincinnati, O.

Jas. Clark, Jr., Electrical Co., Louisville, Ky.

Detrick & Harvey Machine Co., Baltimore, Md.

Espen-Lucas Machine Works, Philadelphia, Pa.

Wm. Gardam & Son, 221 Fulton St., N.Y.

Garvin Machine Co., Spring and Varick Sts., New York.

Gem Mfg. Co., Pittsburgh, Pa.

Goodell-Pratt Co., Greenfield, Mass.

Helwig Mfg. Co., St. Paul, Minn.

Ingersoll-Rand Co., 11 Broadway, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Millers Falls Co., 28 Warren St., N. Y.

Niles-Bement-Pond Co., 111 Broadway, New York.

Francis Reed Co., Worcester, Mass.

Stow Flexible Shaft Co., Philadelphia, Pa.

Stow Mfg. Co., Binghamton, N. Y.

United States Electrical Tool Co., Cincinnati, O.

**Drilling Machines. Portable, Electric—**

Cincinnati Electrical Tool Co., Cincinnati, O.

General Electric Co., Schenectady, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

Taylor Machinery Co., Boston, Mass.

United States Electric Tool Co., Cincinnati, O.

**Drilling Machines. Post—**

Champion Blower & Forge Co., Lancaster, Pa.

Cincinnati-Bickford Tool Co., Cincinnati, O.

Cleveland Punch & Shear Works Co., Cleveland, O.

Fox Machine Co., Grand Rapids, Mich.

Garvin Machine Co., Spring and Varick Sts., New York.

Goodell-Pratt Co., Greenfield, Mass.

E. Harrington, Son & Co., Inc., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

B. B. Noyes & Co., Greenfield, Mass.

Francis Reed Co., Worcester, Mass.

Sibley Machine Tool Co., South Bend, Ind.

Silver Mfg. Co., Salem O.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**Drilling Machines. Radial—**

American Tool Works Co., Cincinnati, O.

Baush Machine Tool Co., Brightwood, Mass.

Cincinnati-Bickford Tool Co., Cincinnati, O.

Cincinnati Electrical Tool Co., Cincinnati, O.

Jos. Clark, Jr., Electric Co., Louisville, Ky.

Cleveland Punch & Shear Works, Cleveland, O.

Dresser Machine Tool Co., Cincinnati, O.

Garvin Machine Co., Spring and Varick Sts., New York.

Gem Mfg. Co., Pittsburgh, Pa.

E. Harrington, Son & Co., Inc., Philadelphia, Pa.

Henry & Wright Mfg. Co., Hartford, Ct.

Ingersoll-Rand Co., 11 Broadway, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Newton Machine Tool Works, Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

Stow Flexible Shaft Co., Philadelphia, Pa.

Stow Mfg. Co., Binghamton, N. Y.

United States Electrical Tool Co., Cincinnati, O.

Western Machine Tool Works, Holland, Mich.

**Drilling Machines. Radial Wall—**

Baush Machine Tool Co., Brightwood, Mass.

Cincinnati-Bickford Tool Co., Cincinnati, O.

Cleveland Punch & Shear Works Co., Cleveland, O.

Detrick & Harvey Machine Co., Baltimore, Md.

- Baush Machine Tool Co., Brightwood, Mass.  
Cincinnati-Bickford Tool Co., Cincinnati, O.  
W. P. Davis Machine Co., Rochester, N. Y.  
Dresses Machine Tool Co., Cincinnati, O.  
Wm. Gardam & Son, 221 Fulton St., N. Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
Gem Mfg. Co., Pittsburgh, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
E. Harrington, Son & Co., Philadelphia, Pa.  
Hoefler Mfg. Co., Freeport, Ill.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Mechanics Machine Co., Rockford, Ill.  
Millers Falls Co., 28 Warren St., N. Y.  
New Haven Mfg. Co., New Haven, Ct.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Francis Reed Co., Worcester, Mass.  
Sibley Machine Tool Co., South Bend, Ind.  
Silver Mfg. Co., Salem, O.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Western Machine Tool Works, Holland, Mich.
- Drilling Machines, Gun Barrel—**  
Garvin Machine Co., Spring and Varick Sts., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Pratt & Whitney Co., Hartford, Ct.
- Drilling Machines, High Speed—**  
Henry & Wright Mfg. Co., Hartford, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Taylor & Fenn Co., Hartford, Ct.  
Western Machine Tool Works, Holland, Mich.
- Drilling Machines, Horizontal—**  
W. F. & John Barnes Co., Rockford, Ill.  
Baush Machine Tool Co., Brightwood, Mass.  
Detrick & Harvey Machine Co., Baltimore, Md.  
Espin-Lucas Machine Works, Philadelphia, Pa.  
Wm. Gardam & Son, 221 Fulton St., N. Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
Gem Mfg. Co., Pittsburgh, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
Hoefler Mfg. Co., Freeport, Ill.  
Lucas Machine Tool Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Newton Machine Tool Works, Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Pawling & Harnischfeger, Milwaukee, Wis.  
Pratt & Whitney Co., Hartford, Ct.  
Rockford Drilling Machine Co., Rockford, Ill.  
Wiley & Russell Mfg. Co., Greenfield, Mass.
- Drilling Machines, Locomotive Frame—**  
American Tool Works Co., Cincinnati, O.
- Baush Machine Tool Co., Brightwood, Mass.  
Cincinnati-Bickford Tool Co., Cincinnati, O.  
Wm. Gardam & Son, 221 Fulton St., N. Y.  
Gem Mfg. Co., Pittsburgh, Pa.  
E. Harrington, Son & Co., Inc., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Stow Flexible Shaft Co., Philadelphia, Pa.
- Drilling Machines, Marble—**  
American Tool Works Co., Cincinnati, O.  
Cincinnati Electrical Tool Co., Cincinnati, O.  
Wm. Gardam & Son, 221 Fulton St., N. Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
Gem Mfg. Co., Pittsburgh, Pa.  
E. Harrington, Son & Co., Philadelphia, Pa.  
Henry & Wright Mfg. Co., Hartford, Ct.  
Pratt & Whitney Co., Hartford, Ct.  
Francis Reed Co., Worcester, Mass.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.  
United States Electrical Tool Co., Cincinnati, O.
- Drilling Machines, Mining—**  
Jeffrey Mfg. Co., Columbus, O.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.
- Drilling Machines, Multiple—**  
Bancroft & Co., Philadelphia, Pa.  
W. F. & John Barnes Co., Rockford, Ill.  
Baush Machine Tool Co., Brightwood, Mass.  
Cincinnati-Bickford Tool Co., Cincinnati, O.  
Cincinnati Electrical Tool Co., Cincinnati, O.  
Jas Clark, Jr., Electrical Co., Louisville, Ky.  
Cleveland Punch & Shear Works Co., Cleveland, O.  
Fox Machine Co., Grand Rapids, Mich.  
Wm. Gardam & Son, 221 Fulton St., N. Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
E. Harrington, Son & Co., Inc., Philadelphia, Pa.  
Henry & Wright Mfg. Co., Hartford, Ct.  
Hoefler Mfg. Co., Freeport, Ill.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Mechanics Machine Co., Rockford, Ill.  
National Machine Co., Hartford, Ct.  
Newton Machine Tool Works, Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Francis Reed Co., Worcester, Mass.  
Rockford Drilling Machine Co., Rockford, Ill.  
Sigourney Tool Co., Hartford, Ct.  
Taylor & Fenn Co., Hartford, Ct.  
Taylor Machinery Co., Boston, Mass.  
Waltham Machine Works, Waltham, Mass.

Washburn Shops, Worcester, Mass.  
Western Machine Tool Works, Holland, Mich.

**Drilling Machines, Oil Well—**

American Well Works, Aurora, Ill.  
Keystone Driller Co., Beaver Falls, Pa.  
Stow Flexible Shaft Co., Philadelphia, Pa.

**Drilling Machines, Over-head Traveling—**

Cincinnati-Bickford Tool Co., Cincinnati, O.

Wm. Gardam & Son, 221 Fulton St., N.Y.  
Gem Mfg. Co., Pittsburgh, Pa.

**Drilling Machines, Pinion—**

Blake & Johnson Co., Waterbury, Ct.

**Drilling Machines, Plug-Pneumatic—**

Helwig Mfg. Co., St. Paul, Minn.

**Drilling Machines, Pneumatic—**

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
Clayton Air Compressor Works, 115 Broadway, New York.

Helwig Mfg. Co., St. Paul, Minn.  
Ingersoll-Rand Co., 11 Broadway, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Pittsburgh Pneumatic Co., Canton, O.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

**Drilling Machines, Portable—**

American Tool Works Co., Cincinnati, O.  
Baush Machine Tool Co., Brightwood, Mass.

Buffalo Forge Co., Buffalo, N. Y.  
Champion Blower & Forge Co., Lancaster, Pa.

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Cincinnati-Bickford Tool Co., Cincinnati, O.

Cincinnati, O. Electrical Tool Co., Cincinnati, O.

Jas. Clark, Jr., Electrical Co., Louisville, Ky.

Detrick & Harvey Machine Co., Baltimore, Md.

Espen-Lucas Machine Works, Philadelphia, Pa.

Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick Sts., New York.

Gem Mfg. Co., Pittsburgh, Pa.

Goodell-Pratt Co., Greenfield, Mass.

Helwig Mfg. Co., St. Paul, Minn.

Ingersoll-Rand Co., 11 Broadway, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Millers Falls Co., 28 Warren St., N. Y.

Niles-Bement-Pond Co., 111 Broadway, New York.

Francis Reed Co., Worcester, Mass.

Stow Flexible Shaft Co., Philadelphia, Pa.

Stow Mfg. Co., Binghamton, N. Y.

United States Electrical Tool Co., Cincinnati, O.

**Drilling Machines, Portable Electric—**

Cincinnati Electrical Tool Co., Cincinnati, O.

General Electric Co., Schenectady, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

Taylor Machinery Co., Boston, Mass.

United States Electric Tool Co., Cincinnati, O.

**Drilling Machines, Post—**

Champion Blower & Forge Co., Lancaster, Pa.

Cincinnati-Bickford Tool Co., Cincinnati, O.

Cleveland Punch & Shear Works Co., Cleveland, O.

Fox Machine Co., Grand Rapids, Mich.

Garvin Machine Co., Spring and Varick Sts., New York.

Goodell-Pratt Co., Greenfield, Mass.

E. Harrington, Son & Co., Inc., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

B. B. Noyes & Co., Greenfield, Mass.

Francis Reed Co., Worcester, Mass.

Sibley Machine Tool Co., South Bend, Ind.

Silver Mfg. Co., Salem O.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**Drilling Machines, Radial—**

American Tool Works Co., Cincinnati, O.

Baush Machine Tool Co., Brightwood, Mass.

Cincinnati-Bickford Tool Co., Cincinnati, O.

Cincinnati Electrical Tool Co., Cincinnati, O.

Jos. Clark, Jr., Electric Co., Louisville, Ky.

Cleveland Punch & Shear Works, Cleveland, O.

Dreses Machine Tool Co., Cincinnati, O.

Garvin Machine Co., Spring and Varick Sts., New York.

Gem Mfg. Co., Pittsburgh, Pa.

E. Harrington, Son & Co., Inc., Philadelphia, Pa.

Henry & Wright Mfg. Co., Hartford, Ct.

Ingersoll-Rand Co., 11 Broadway, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Newton Machine Tool Works, Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

Stow Flexible Shaft Co., Philadelphia, Pa.

Stow Mfg. Co., Binghamton, N. Y.

United States Electrical Tool Co., Cincinnati, O.

Western Machine Tool Works, Holland, Mich.

**Drilling Machines, Radial Wall—**

Baush Machine Tool Co., Brightwood, Mass.

Cincinnati-Bickford Tool Co., Cincinnati, O.

Cleveland Punch & Shear Works Co., Cleveland, O.

Detrick & Harvey Machine Co., Baltimore, Md.

Garvin Machine Co., Spring and Varick  
Sts., New York.

E. Harrington, Son & Co., Philadelphia,  
Pa.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

### **Drilling Machines, Rock, Diamondless Core—**

Ingersoll-Rand Co., 11 Broadway, N. Y.

### **Drilling Machines, Sensi- tive—**

W. F. & John Barnes Co., Rockford, Ill.  
Cincinnati Electrical Tool Co., Cincin-  
nati, O.

Jas. Clark, Jr., Electric Co., Louisville,  
Ky.

Fox Machine Co., Grand Rapids, Mich.

Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick  
Sts., New York.

Goodell-Pratt Co., Greenfield, Mass.  
E. Harrington, Son & Co., Philadelphia,  
Pa.

Henry & Wright Mfg. Co., Hartford, Ct.

Hofer Mfg. Co., Freeport, Ill.  
W. B. Knight Machinery Co., St. Louis,  
Mo.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Mechanics Machine Co., Rockford, Ill.  
National Machine Co., Hartford, Ct.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Pratt & Whitney Co., Hartford, Ct.  
Francis Reed Co., Worcester, Mass.

Robertson Mfg. Co., Buffalo, N. Y.  
Rockford Drilling Machine Co., Rockford,  
Ill.

Sigourney Tool Co., Hartford, Ct.  
Stow Flexible Shaft Co., Philadelphia, Pa.

Taylor & Fenn Co., Hartford, Ct.  
Taylor Machinery Co., Boston, Mass.

United States Electrocal Tool Co., Cin-  
cinnati, O.

Washburn Shops, Worcester, Mass.

### **Drilling Machines, Spindle—**

Bancroft & Co., Philadelphia, Pa.  
Baush Machine Tool Co., Brightwood,  
Mass.

Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick  
Sts., New York.

E. Harrington, Son & Co., Inc., Phila-  
delphia, Pa.

Henry & Wright Mfg. Co., Hartford, Ct.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

National Machine Co., Hartford, Ct.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.

Pratt & Whitney Co., Hartford, Ct.  
F. E. Reed Co., Worcester, Mass.

Francis Reed Co., Worcester, Mass.  
F. B. Shuster Co., New Haven, Ct.

Sibley Machine Tool Co., South Bend,  
Ind.

Taylor & Fenn Co., Hartford, Ct.  
Western Machine Tool Works, Holland,  
Mich.

### **Drilling Machines, Sub- marine—**

Ingersoll-Rand Co., 11 Broadway, N. Y.

### **Drilling Machines, Suspension—**

Cincinnati-Bickford Tool Co., Cincin-  
nati, O.

Cleveland Punch & Shear Works Co.,  
Cleveland, O.

Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick  
Sts., New York.

E. Harrington, Son & Co., Inc., Phila-  
delphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Francis Reed Co., Worcester, Mass.

### **Drilling Machines, Tap- ping—**

American Tool Works Co., Cincinnati, O.  
Cincinnati-Bickford Tool Co., Cincin-  
nati, O.

Cincinnati Electrical Tool Co., Cincin-  
nati, O.

Drees Machine Tool Co., Cincinnati, O.  
Wm. Gardam & Son, 221 Fulton St., N.Y.

Garvin Machine Co., Spring and Varick  
Sts., New York.

Gem Mfg. Co., Pittsburgh, Pa.  
E. Harrington, Son & Co., Inc., Phila-  
delphia, Pa.

C. E. Jennings & Co., 42 Murray St.,  
New York.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

National Machine Co., Hartford, Ct.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.

Pratt & Whitney Co., Hartford, Ct.  
Robertson Drill & Tool Co., Buffalo,

Stow Flexible Shaft Co., Philadelphia, Pa.  
Taylor Machinery Co., Boston, Mass.

Western Machine Tool Works, Holland,  
Mich.

### **Drilling Machines, Track—**

Espen-Lucas Machine Works, Broad &  
Noble Sts., Philadelphia, Pa.

Wm. Gardam & Son, Inc., 221 Fulton  
St., New York.

Goodell-Pratt Co., Greenfield, Mass.  
E. Harrington, Son & Co., Inc., Phila-  
delphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Millers Falls Co., 28 Warren St., N. Y.  
Niles-Bement-Pond Co., 111 Broadway.

Sheffield Car Co., Three Rivers, Mich.  
Stow Flexible Shaft Co., 26th & Callow-  
hill Sts., Philadelphia, Pa.

Stow Mfg. Co., Binghamton, N. Y.

### **Drilling Machines, Turret—**

Bancroft & Co., Philadelphia, Pa.  
Garvin Machine Co., Spring and Varick  
Sts., New York.

E. Harrington, Son & Co., Inc., Phila-  
delphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

A. D. Quinn, Hartford, Ct.  
Francis Reed Co., Worcester, Mass.

### **Drilling Machines, Uni- versal—**

American Tool Works Co., Cincinnati, O.

Baush Machine Tool Co., Brightwood, Mass.  
Cincinnati-Bickford Tool Co., Cincinnati, O.  
Detrick & Harvey Machine Co., Baltimore, Md.  
Dreses Machine Tool Co., Cincinnati, O.  
Fox Machine Co., Grand Rapids, Mich.  
Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
E. Harrington, Son & Co., Inc., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Millers Falls Co., 28 Warren St., N. Y.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Robertson Mfg. Co., Buffalo, N. Y.  
D. Saunders' Sons, Yonkers, N. Y.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Western Machine Tool Works, Holland, Mich.

### Drilling Machines, Vertical—

American Tool Works Co., Cincinnati, O.  
Bancroft & Co., Philadelphia, Pa.  
W. F. & John Barnes Co., Rockford, Ill.  
Baush Machine Tool Co., Brightwood, Mass.  
Cincinnati-Bickford Tool Co., Cincinnati, O.  
W. P. Davis Machine Co., Rochester, N. Y.  
Dreses Machine Tool Co., Cincinnati, O.  
Wm. Gardam & Son, 221 Fulton St., N.Y.  
Garvin Machine Co., Spring and Varick Sts., New York.  
Goodell-Pratt Co., Greenfield, Mass.  
E. Harrington, Son & Co., Inc., Philadelphia, Pa.  
Henry & Wright Mfg. Co., Hartford, Ct.  
Hofer Mfg. Co., Freeport, Ill.  
W. B. Knight Machinery Co., St. Louis, Mo.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Mechanics Machine Co., Rockford, Ill.  
National Machine Co., Hartford, Ct.  
New Haven Mfg. Co., New Haven, Ct.  
Newton Machine Tool Works, Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Pratt & Whitney Co., Hartford, Ct.  
Francis Reed Co., Worcester, Mass.  
Robertson Drill & Tool Co., Buffalo, N. Y.  
Robertson Mfg. Co., Buffalo, N. Y.  
Rockford Drilling Machine Co., Rockford, Ill.  
Sibley Machine Tool Co., South Bend, Ind.  
Sigourney Tool Co., Hartford, Ct.  
Silver Mfg. Co., Salem, O.  
Taylor & Fenn Co., Hartford, Ct.  
Taylor Machinery Co., Boston, Mass.  
Washburn Shops, Worcester, Mass.  
Western Machine Tool Works, Holland, Mich.

### Drills—

(See Taps and Drills.)

**Drills, Anthracite—**  
Hubbard & Co., Pittsburgh, Pa.

**Drills, Artesian Well—**  
American Well Works, Aurora, Ill.  
Keystone Driller Co., Beaver Falls, Pa.

**Drills, Bell Hangers' and Electricians'—**

Irrington Mfg. Co., Irvington, N. J.

### Drills, Bit Point—

(See Drills, Twist.)

### Drills, Bit Stock—

Bethlehem Steel Co., So. Bethlehem, Pa.  
Cleveland Twist Drill Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Standard Tool Co., Cleveland, O.

Whitman & Barnes Mfg. Co., Chicago.

### Drills, Blacksmiths'—

(See Drills, Twist.)

### Drills, Breast—

Jas. Clark, Jr., Electric Co., Louisville, Ky.

John S. Fray & Co., Bridgeport, Ct.

Gem Mfg. Co., Pittsburgh, Pa.

Goodell-Pratt Co., Greenfield, Mass.

Ingersoll-Rand Co., 11 Broadway, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Millers Falls Co., 28 Warren St., N. Y.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

United States Electrical Tool Co., Cincinnati, O.

### Drills, Breast, Pneumatic—

Helwig Mfg. Co., St. Paul, Minn.

### Drills, Brick and Cement—

Diamond Expansion Bolt Co., 90 West St., New York.

Irrington Mfg. Co., Irvington, N. J.

Kilborn & Bishop Co., New Haven, Ct.

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

Star Extension Bolt Co., 147 Cedar St., New York.

Steward & Romaine Mfg. Co., Philadelphia, Pa.

### Drills, Center—

(See Drills, Twist.)

### Drills, Chain—

Goodell-Pratt Co., Greenfield, Mass.

Millers Falls Co., 28 Warren St., N. Y.

### Drills, Clamp—

Francis Reed Co., Worcester, Mass.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

United States Electrical Tool Co., Cincinnati, O.

### Drills, Combination Center—

Cleveland Twist Drill Co., Cleveland, O.

J. T. Slocumb Co., Providence, R. I.

Whitman & Barnes Mfg. Co., Chicago, Ill.

### Drills, Combined Seed and Fertilizer—

Bateman Mfg. Co., Glenloch, N. J.

### Drills, Corn—

(See Planters and Drills, Corn.)

### Drills, Cotter—

Niles-Bement-Pond Co., 111 Broadway, New York.

### Drills, Diamond Core Prospecting—

Keystone Well Engineering Co., Beaver Falls, Pa.



Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

**Drills, Diamond Rock—**  
Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

**Drills, Electricians' and Drill Holders—**  
Star Expansion Bolt Co., 147-149 Cedar St., New York.

**Drills, Extra Length—**  
(See Bits, Bell Hangers', Electricians'.)

**Drills, Flat—**  
American Specialty Co., Monadnock Bldg., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.  
Whitman & Barnes Mfg. Co., Chicago, Ill.

**Drills, Flat Twisted—**  
American Specialty Co., Monadnock Bldg., Chicago, Ill.

**Drills, Fluted—**  
Cleveland Twist Drill Co., Cleveland, O.  
Standard Tool Co., Cleveland, O.  
Whitman & Barnes Mfg. Co., Chicago.  
Wiley & Russell Mfg. Co., Greenfield, Mass.

**Drills, Glass, Diamond—**  
N. E. Dickinson, 47 Maiden Lane, N. Y.  
Thos. L. Dickinson, 64 Nassau St., N. Y.

**Drills, Hammer—**  
Ingersoll-Rand Co., 11 Broadway, N. Y.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

**Drills, Hand—**  
Cincinnati Electrical Tool Co., Cincinnati, O.

Jas. Clark, Jr., Electric Co., Louisville, Ky.

John S. Fray & Co., Bridgeport, Ct.  
Gem Mfg. Co., Pittsburgh, Pa.

Goodell-Pratt Co., Greenfield, Mass.  
Keystone Driller Co., Beaver Falls, Pa.

Keystone Mfg. Co., Buffalo, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Millers Falls Co., 28 Warren St., N. Y.  
North Bros. Mfg. Co., American St. and Lehigh Ave., Philadelphia, Pa.

R. E. Noyes & Co., Greenfield, Mass.  
Francis Reed Co., Worcester, Mass.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

United States Electrical Tool Co., Cincinnati, O.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**Drills, High Speed Steel—**  
American Specialty Co., Monadnock Bldg., Chicago, Ill.

Cleveland Twist Drill Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Whitman & Barnes Mfg. Co., Chicago, Ill.

**Drills, Hollow—**  
Cleveland Twist Drill Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Standard Tool Co., Cleveland, O.

**Drills, Mining—**  
Hubbard & Co., Pittsburgh, Pa.

**Drills, Musher Twist—**  
Samuel Osborn & Co., Boston, Mass.

**Drills, Oil—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Whitman & Barnes Mfg. Co., Chicago.

**Drills, Oil Tube—**  
Cleveland Twist Drill Co., Cleveland, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Standard Tool Co., Cleveland, O.

Whitman & Barnes Mfg. Co., Chicago, Ill.

**Drills, Ratchet—**  
American Specialty Co., Monadnock Bldg., Chicago, Ill.

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

Ashcroft Mfg. Co., 85 Liberty St., N. Y.

Billings & Spencer Co., Hartford, Ct.

Cleveland Twist Drill Co., Cleveland, O.

Curtis & Curtis Co., Bridgeport, Ct.

Goodell-Pratt Co., Greenfield, Mass.

Keystone Mfg. Co., Buffalo, N. Y.

Kilburn & Bishop Co., New Haven, Ct.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Millers Falls Co., 28 Warren St., N. Y.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Charles Parker Co., Meriden, Ct.

Pratt & Whitney Co., Hartford, Ct.

Standard Tool Co., Cleveland, O.

Whitman & Barnes Mfg. Co., Chicago.

**Drills, Ratchet, Universal—**  
Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Drills, Reciprocating—**  
Goodell-Pratt Co., Greenfield, Mass.

**Drills, Rock—**  
Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Clayton Air Compressor Works, 114-118 Liberty St., New York.

Hanna Engineering Works, 840 Elston Ave., Chicago, Ill.

Ingersoll-Rand Co., 11 Broadway, New York.

Jeffrey Mfg. Co., Columbus, O.

Keystone Well Engineering Co., Beaver Falls, Pa.

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

#### MERCHANTS.

Patriarche & Bell, 215 Pearl St., N. Y.

**Drills, Rock, Electric Air—**  
Ingersoll-Rand Co., 11 Broadway, N. Y.

**Drills, Seed, Hand—**  
Bateman Mfg. Co., Grenloch, N. J.

**Drills, Shell—**  
(See Drills, Twist.)

**Drills, Star—**  
Irvington Mfg. Co., Irvington, N. J.

Kilborn & Bishop Co., New Haven, Ct.  
Star Expansion Bolt Co., 147-149 Cedar St., New York.

**Drills, Stone—**

Diamond Expansion Bolt Co., 80 West St., New York.  
Kilborn & Bishop Co., New Haven, Ct.  
Mathias Klein & Sons, 87-89 Van Buren St., Chicago, Ill.  
F. R. Patch Manufacturing Co., Rutland, Vt.

Star Expansion Bolt Co., 147 Cedar St., New York.

**Drills, Straight Shank—**

(See Drills, Twist.)

**Drills, Straightway—**

(See Drills, Twist.)

**Drills, Tap—**

Butterfield & Co., Derby Line, Vt.  
Cleveland Twist Drill Co., Cleveland, O.  
Goodell-Pratt Co., Greenfield, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morse Twist Drill & Machine Co., New Bedford, Mass.

Standard Tool Co., Cleveland, O.

**Drills, Taper Shank—**

(See Drills, Twist.)

**Drills, Three and Four**

**Groove—**

(See Drills, Twist.)

**Drills, Twist—**

American Specialty Co., Monadnock Bldg., Chicago, Ill.  
Cleveland Twist Drill Co., Cleveland, O.  
Goodell-Pratt Co., Greenfield, Mass.  
Irvington Mfg. Co., Irvington, N. J.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
Samuel Osborn & Co., Boston, Mass.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Pratt & Whitney Co., Hartford, Ct.  
Standard Tool Co., Cleveland, O.  
Whitman & Barnes Mfg. Co., Chicago.

**Drills, Wall Radial—**

Cincinnati-Bickford Tool Co., Cincinnati, O.

**Drills, Wood Boring Brace—**

Cleveland Twist Drill Co., Cleveland, O.  
H. H. Mayhew Co., Shelburne Falls, Mass.  
Standard Tool Co., Cleveland, O.  
James Swan Co., Seymour, Ct.

**Drills, Wood Boring Machine—**

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.  
United States Electrical Tool Co., Cincinnati, O.

**Drink Shakers—**

(See Shakers, Drink.)

**Drinking Fountains—**

(See Fountains, Drinking.)

**Dripping Pans—**

(See Pans, Dripping.)

**Drive Hooks, Punches,**

**Screws—**

(See Hooks, Punches, Screws.)

**Drivers, Coopers—**

Piqua Handle & Mfg. Co., Piqua, O.  
L. & I. J. White Co., Buffalo, N. Y.

**Drivers, Drift Bolt—**

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

**Drivers, Pile—**

Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.  
Industrial Works, Bay City, Mich.  
Interstate Engineering Co., Bedford, O.  
Lidgerwood Mfg. Co., 96 Liberty St., N. Y.  
Vulcan Iron Works, 28 No. Irving Ave., Chicago, Ill.

**Drivers, Pile, Pneumatic—**

Ingersoll-Rand Co., 11 Broadway, New York.

**Drivers, Pile, Railroad—**

Industrial Works, Bay City, Mich.

Interstate Engineering Co., Bedford, O.

**Drivers, Pile, Steam—**

Interstate Engineering Co., Bedford, O.  
Vulcan Iron Works, 28 No. Irving Ave., Chicago, Ill.

**Drivers, Screw—**

Arcade Mfg. Co., Freeport, Ill.  
Billings & Spencer Co., Hartford, Ct.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Henry Diston & Sons, Philadelphia, Pa.  
Elmore Tool Mfg. Co., Hartford, Ct.  
Ford Auger Bit Co., Holyoke, Mass.  
Geo. E. Gay, Augusta, Me.  
Goodell-Pratt Co., Greenfield, Mass.  
Kilborn & Bishop Co., New Haven, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
H. H. Mayhew Co., Shelburne Falls, Mass.  
Millers Falls Co., 28 Warren St., N. Y.  
National Saw Co., Newark, N. J.  
North Bros. Mfg. Co., American St. and Lehigh Ave., Philadelphia, Pa.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Snell Mfg. Co., Fiskdale, Mass.  
Stanley Rule & Level Co., New Britain, Ct.  
L. S. Starrett Co., Athol, Mass.  
James Swan Co., Seymour, Ct.  
Tuck Mfg. Co., Brockton, Mass.

**Drivers, Screw and Holder—**  
North Bros. Mfg. Co., Philadelphia, Pa.

**Drivers, Screw, Automatic—**

Geo. E. Gay, Augusta, Me.  
Goodell-Pratt Co., Greenfield, Mass.  
Millers Falls Co., 28 Warren St., N. Y.  
North Bros. Mfg. Co., Philadelphia, Pa.

**Drivers, Screw, Combination—**

Arcade Mfg. Co., Freeport, Ill.  
Billings & Spencer Co., Hartford, Ct.

**Drivers, Screw, Extension—**

Elmore Tool Mfg. Co., Hartford, Ct.

**Drivers, Screw Eye—**

North Bros. Mfg. Co., Philadelphia, Pa.

**Drivers, Screw, Flexible**

**Shaft—**

Coates Clipper Mfg. Co., Worcester, Mass.

**Drivers, Screw, Insulated—**

Elmore Tool Mfg. Co., Hartford, Ct.

**Drivers, Screw, Lineman's—**

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

**Drivers, Screw, Magazine—**  
Billings & Spencer Co., Hartford, Ct.  
Goodell-Pratt Co., Greenfield, Mass.  
North Bros. Mfg. Co., Philadelphia, Pa.

**Drivers, Screw, Ratchet—**  
Geo. E. Gay, Augusta, Me.  
Goodell-Pratt Co., Greenfield, Mass.  
Millers Falls Co., 28 Warren St., N. Y.  
North Bros. Mfg. Co., Philadelphia, Pa.  
Stow Flexible Shaft Co., 26th & Callow-  
hill Sta., Philadelphia, Pa.  
James Swan Co., Seymour, Ct.

**Drivers, Screw, Spiral—**  
Geo. E. Gay, Augusta, Me.  
Goodell-Pratt Co., Greenfield, Mass.  
O. E. Jennings & Co., 42 Murray St.,  
New York.

Millers Falls Co., 28 Warren St., N. Y.  
North Bros. Mfg. Co., Philadelphia, Pa.

**Drivers, Staple—**  
I. S. Spencer's Sons, Guilford, Ct.

**Drives, Automobile Bevel  
Gear Axle—**

Foots Bros. Gear & Machine Co., 24-30  
S. Clinton St., Chicago, Ill.

**Drives, Engine Driven Belt—**  
Thomas Carlin's Sons Co., N. S. Pitts-  
burgh, Pa.

**Drives, Motor Driven Belt—**  
Thomas Carlin's Sons Co., N. S. Pitts-  
burgh, Pa.

**Drives, Rope, Portable  
Drill—**

Gem Mfg. Co., Pittsburgh, Pa.

**Drop Lights, Gas—**  
(See Gas Portables.)

**Drug Mills—**  
(See Mills, Drug.)

**Druggists' Scales—**  
(See Scales, Counter and Grocers'.)

**Drugs—**  
(See Chemicals and Drugs.)

**Drums and Barrels, Ship-  
ping—**

W. J. Clark Co., Salem, O.

**Drums, Friction Winding—**  
Eastern Machinery Co., New Haven, Ct.  
Morgan Construction Co., Worcester,  
Mass.

Poole Engineering & Machine Co., Balti-  
more, Md.

**Drums, Oil, Steel—**  
Wm. E. Scaife & Sons Co., Pittsburgh.

**Drums, Steam—**

American Welding Co., Carbondale, Pa.

National Tube Co., Pittsburgh, Pa.

**Drums, Steam Boiler—**  
R. Munroe & Sons Mfg. Corporation,  
Pittsburgh, Pa.

**Drums, Water, Seamless  
Welded—**

American Welding Co., Carbondale, Pa.

**Dry Docks—**  
Newport News Ship Building & Dry Dock  
Co., Newport News, Va.

**Dry Houses, Wire—**  
Morgan Construction Co., Worcester,  
Mass.

**Dry Kiln Appurtenances—**  
American Blower Co., Detroit, Mich.  
Boston Blower Co., Hyde Park, Mass.  
Green Fuel Economizer Co., Matteawan,  
N. Y.

Kiln & Chimney Construction Co., Brook-  
lyn, N. Y.

Soule Steam Feed Works, Meridian, Miss.  
B. F. Sturtevant Co., Boston, Mass.

**Dryers, Board—**  
Geo. P. Clark Co., Windsor Locks, Ct.

**Dryers, Brick—**  
American Blower Co., Detroit, Mich.  
Boston Blower Co., Hyde Park, Mass.  
Buffalo Forge Co., Buffalo, N. Y.  
Green Fuel Economizer Co., Matteawan,  
N. Y.

Kiln & Chimney Construction Co., Brook-  
lyn, N. Y.

B. F. Sturtevant Co., Hyde Park, Mass.

**Dryers, Cement—**  
Green Fuel Economizer Co., Matteawan,  
N. Y.

Kiln & Chimney Construction Co., Brook-  
lyn, N. Y.

**Dryers, Cloth and Cotton—**  
American Blower Co., Detroit, Mich.

Bayley Mfg. Co., Milwaukee, Wis.  
Boston Blower Co., Hyde Park, Mass.

Buffalo Forge Co., Buffalo, N. Y.  
Green Fuel Economizer Co., Matteawan,  
N. Y.

B. F. Sturtevant Co., Boston, Mass.

Taylor & Fenn Co., Hartford, Ct.

**Dryers, Clothes—**  
Green Fuel Economizer Co., Matteawan,  
N. Y.

Hill Dryer Co., Worcester, Mass.

**Dryers for Liquids—**  
Buffalo Foundry & Machine Co., Buffalo,  
N. Y.

**Dryers, Grain—**

American Blower Co., Detroit, Mich.  
Bayley Mfg. Co., Milwaukee, Wis.

Buffalo Forge Co., Buffalo, N. Y.  
Green Fuel Economizer Co., Matteawan,  
N. Y.

B. F. Sturtevant Co., Boston, Mass.

**Dryers, Leather—**  
American Blower Co., Detroit, Mich.

Bayley Mfg. Co., Milwaukee, Wis.  
Boston Blower Co., Hyde Park, Mass.

Buffalo Forge Co., Buffalo, N. Y.  
Green Fuel Economizer Co., Matteawan,  
N. Y.

B. F. Sturtevant Co., Hyde Park, Mass.

**Dryers, Lumber—**  
American Blower Co., Detroit, Mich.

Boston Blower Co., Hyde Park, Mass.  
Green Fuel Economizer Co., Matteawan,  
N. Y.

B. F. Sturtevant Co., Hyde Park, Mass.

**Dryers, Mold—**  
Hanna Engineering Works, 840 Elston  
Ave., Chicago, Ill.

**Dryers, Rotary Drum—**  
Buffalo Foundry & Machine Co., Buffalo,  
N. Y.

**Dryers, Sand—**  
Green Fuel Economizer Co., Matteawan,  
N. Y.

J. W. Paxson Co., 1021 N. Delaware Ave.,  
Philadelphia, Pa.

**Dryers, Shelf—**  
Buffalo Foundry & Machine Co., Buffalo,  
N. Y.

**Dryers, Soapstone, Boot—**  
American Blower Co., Detroit, Mich.

Bayley Mfg. Co., Milwaukee, Wis.  
B. F. Sturtevant Co., Hyde Park, Mass.

**Dryers. Vacuum—**

Buffalo Foundry & Machine Co., Buffalo, N. Y.

**Drying and Impregnating Apparatus—**

Buffalo Foundry & Machine Co., Buffalo, N. Y.

**Drying Out Machines. Sheet Metal—**

Baird Machine Co., Oakville, Ct.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Drying Pans—**

(See Pans, Dry.)

**D's. Malleable—**  
(See Tops, Malleable D Handle.)

**D's. Malleable. Shovel and Spade Handle—**

Louden Machinery Co., Fairfield, Ia.

**Dumb Bells—**

(See Bells, Dumb.)

**Dumb Waiter Pulleys—**  
(See Pulleys.)

**Dumb Waiters—**

(See Waiters, Dumb.)

**Dumping Buckets. Self —**  
(See Buckets, Self Dumping.)

**Duplicators. Letters. Bills. &c.—**

(See Hektographs.)

**Dust Collectors. Pans—**  
(See Collectors, Pans.)

**Dusters—**  
(See Brushes, Whitewash, Horse, &c.)

**Dusters. Turkey. Counter. &c.—**

Osborn Mfg. Co., Cleveland, O.

**Dyeing Machines—**

Geo. P. Clark Co., Windsor Locks, Ct.  
Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.  
Taylor & Fenn Co., Hartford, Ct.

**Dynamos—**

Crocker-Wheeler Co., Ampere, N. J.  
De Laval Steam Turbine Co., Trenton, N. J.

Fort Wayne Electric Works, Fort Wayne, Ind.

General Electric Co., Schenectady, N. Y.

Holtzer-Cabot Electric Co., Boston, Mass.

Sheffield Car Co., Three Rivers, Mich.

B. F. Sturtevant Co., Boston, Mass.

Thomson Electric Welding Co., Lynn, Mass.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**MERCHANTS.**

Charles Behlen, 72 Trinity Place, N. Y.

George Bender, 82 Centre St., New York.

McDowell & Co., Allegheny, Pa.

MacGovern, Archer & Co., 114 Liberty St., New York.

Pfannmueller Engineering Co., First National Bank Bldg., Chicago, Ill.

Power Equipment Co., Fisher Bldg., Chicago, Ill.

L. F. Serfert's Sons, Inc., 437-441 N. 3d St., Philadelphia, Pa.

Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.

Jacob Ullman, Buffalo, N. Y.

Walsh's Sons & Co., Newark, N. J.

Wickes Bros., Saginaw, Mich.

Yearley & Levene, 305 N. 3d St., Philadelphia, Pa.

**Dynamos. Battery Charging—**

Crocker-Wheeler Co., Ampere, N. J.

General Electric Co., Schenectady, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Dynamos. Electro Plating—**

Jas. Clark, Jr., Electric Co., Louisville, Ky.

Crocker-Wheeler Co., Ampere, N. J.

General Electric Co., Schenectady, N. Y.

Hanson & Van Winkle Co., Newark, N. J.

Holtzer-Cabot Electric Co., Boston, Mass.

U. S. Electro-Galvanizing Co., Brooklyn, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Zucker & Levett & Loeb Co., 526-530 West 25th St., New York.

**Ears. Brass. Pail—**

Bridgeport Brass Co., 253 B'way, N. Y.

Waterbury Brass Co., Waterbury, Ct.

**Ears. Pail and Tub. &c.—**

Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

E. H. Titchener & Co., Binghamton, N. Y.

Wright Wire Co., Worcester, Mass.

**Easels. Wire—**

(See Household Articles, Wire.)

**Eave Trough Hangers—**

(See Hangers, Eave Trough.)

**Eave Trough Stock—**

(See Sheets, Metal, Eave Trough and Conductor Stock.)

**Eave Troughs and Gutters—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

Delphos Mfg. Co., Delphos, O.

U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.

David Lupton's Sons Co., Westmoreland and Janney Sts., Philadelphia, Pa.

Merchant & Evans Co., Philadelphia, Pa.

Thomas Steel Co., Niles, O.

**Eccelesiastical Ware. Gold. Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Economizers. Fuel—**

Green Fuel Economizer Co., Mattewan, N. Y.

Parker Boiler Co., Pennsylvania Bldg., Philadelphia, Pa.

B. F. Sturtevant Co., Boston, Mass.

**Edgers. Turf—**

American Fork & Hoe Co., Cleveland, O.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

F. E. Kohler & Co., Canton, O.

Louden Machinery Co., Fairfield, Ia.

Northwestern Consolidated Iron & Steel Mfg. Co., Burlington, Ia.

Osmundson Spade Mfg. Co., Perry, Ia.

Philadelphia Lawn Mower Co., 3107-3109 Chestnut St., Philadelphia, Pa.

Supplee Hardware Co., Market and Fifth Sts., Philadelphia, Pa.

**Edges, Straight—**

Brown &amp; Sharpe Mfg. Co., Providence,

R. I.

Henry Disston &amp; Sons, Philadelphia, Pa.

Keuffel &amp; Esser Co., 127 Fulton St.,

New York.

National Saw Co., Newark, N. J.

Pratt &amp; Whitney Co., Hartford, Ct.

Simonds Mfg. Co., Fitchburg, Mass.

L. S. Starrett Co., Athol, Mass.

**Edges, Straight, Paper****Hangers—**

Webster &amp; Perks Tool Co., Springfield, O.

**Edging Machines—**

Blake &amp; Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Garvin Machine Co., Spring and Varick

Sts., New York.

Niagara Machine &amp; Tool Works, Buffalo,

N. Y.

Seneca Falls Mfg. Co., Seneca Falls,

N. Y.

Waterbury Farrel Foundry &amp; Machine

Co., Waterbury, Ct.

**Egg Beaters, Crates—**

(See Beaters, Crates.)

**Egg Boilers, Wire—**

(See Kitchen Articles, Wire.)

**Egg Openers—**

W. R. Hartigan, Collinsville, Ct.

Taplin Mfg. Co., New Britain, Ct.

**8 and 8 Hooks—**

(See Hooks, 8 and 8.)

**Ejectors—**

Eynon-Evans Mfg. Co., 1507 Clearfield St.,

Philadelphia, Pa.

Hancock Inspirator Co., 85-89 Liberty St.,

New York.

Hayden &amp; Derby Mfg. Co., 85-89 Liberty

St., New York.

Lunkenheimer Co., Cincinnati, O.

John H. McGowan Co., Cincinnati, O.

Manning, Maxwell &amp; Moore, Inc., 85 Lib-

erty St., New York.

**Elbow Catches—**

(See Catches, Elbow.)

**Elbow Machines, Corru-****gated and Four-Pieced****Pipe—**

Alexander Bros., Carnegie, Pa.

**Elbow Machines, Pipe and****Furnace—**

Alexander Bros., Carnegie, Pa.

**Elbows and Shoes, Con-****ductor—**

Berger Bros. Co., 231-237 Arch St., Phila-

delphia, Pa.

Chattanooga Roofing &amp; Foundry Co.,

Chattanooga, Tenn.

Arthur C. Harvey Co., Boston, Mass.

Waite, Ranlet &amp; Co., Boston, Mass.

**Elbows, Pipe Conductor—**

Berger Bros. Co., 231-237 Arch St., Phila-

delphia, Pa.

Arthur C. Harvey Co., Boston, Mass.

Merchant &amp; Evans Co., Philadelphia, Pa.

**Elbows, Stove Pipe—**

Chattanooga Roofing &amp; Foundry Co.,

Chattanooga, Tenn.

Dover Stamping &amp; Mfg. Co., Cambridge,

Mass.

S. M. Howes Co., Boston, Mass.

Ohio Stove Pipe &amp; Mfg. Co., New Phila-

delphia, O.

**Election Booths—**

(See Buildings, Election Booth.)

**Electric Batteries, Bells,****&c.—**

(See Batteries, Bells, &amp;c.)

**Electric Bells and Sup-****plies—**

(See Bells, Electric, and Supplies,

Electric.)

**Electric Cut-Outs—**

(See Switches and Cut-Outs.)

**Electric Electroliers—**

(See Electroliers, Electric.)

**Electric Fixtures—**

(See Gas and Electric Fixtures.)

**Electric House Pumping****Sets—**

(See Sets, Electric House Pumping.)

**Electric Light Fittings****(Socket Bushings, Cord****Adjusters, Socket Hooks,****Lamp Attachments for****Gas Fixtures)—**

W. R. Ostrander &amp; Co., 22 Dey St., N. Y.

Plume &amp; Atwood Mfg. Co., Waterbury,

Ct.

**Electric Light Guards—**

(See Guards, Electric Light.)

**Electric Lighting and Pow-****er Apparatus—**

Crocker-Wheeler Co., Ampere, N. J.

**Electric Locomotives—**

(See Locomotives, Electric.)

**Electric Portable Plants,****Drilling, Grinding, &c.—**

Gem Mfg. Co., Pittsburgh, Pa.

**Electric Portables—**

(See Portables, Electric.)

**Electric Storage Batteries—**

(See Batteries, Electric Storage.)

**Electric Woods—**

M. F. Cahill, Boston, Mass.

H. A. Stiles &amp; Co., Boston, Mass.

**Electrical Alarms—**

(See Alarms, Electrical.)

**Electrical Outlet and****Switch Boxes—**

(See Boxes, Electrical Switch and Outlet.)

**Electrical Repairs—**

Jas. Clark, Jr., Electric Co., Louisville,

Ky.

**Electrical Trolley Ma-****terials—**

(See Trolley Materials, Electrical.)

**Electrical Wire—**

(See Wires, Electrical.)

**Electricians, Bits—**

(See Bits, Bell Hangers and Electric-

ians.)

**Electrodes—**

International Acheson Graphite Co., Ni-

agara Falls, N. Y.

**Electro-Plating—**

(See Plating, Electro.)

**Electro Plating Brushes,****Dynamos—**

(See Brushes, Dynamos.)

**Electro Plating Supplies—**

Hanson &amp; Van Winkle Co., Newark, N. J.

Zucker &amp; Levett &amp; Loeb Co., 528-530 West

25th St., New York.

**Electroliers, Electric—**

Goodwin &amp; Kintz Co., Winsted, Ct.

**Electrotype Metal—**

Theo. Hertz Metal Co., St. Louis, Mo.

Merchant &amp; Evans Co., Philadelphia, Pa.

Pittsburgh White Metal Co., Pittsburgh

**Electrotype Presses—**  
(See Presses, Electrotype.)

**Electrotyping—**

A. Musford, Hartford, Ct.  
St. Louis Electrotype Foundry, St. Louis.

**Electrotyping Plumbago—**

Joseph Dixon Crucible Co., Jersey City, N. J.  
International Acheson Graphite Co., Niagara Falls, N. Y.

**Elevating Machinery—**

Brown Hoisting Machinery Co., Cleveland.  
Browning Engineering Co., Cleveland, O.  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.  
W. E. Caldwell Co., Inc., Louisville, Ky.  
Crocker-Wheeler Co., Ampere, N. J.  
Eastern Machinery Co., New Haven, Ct.  
C. W. Hunt Co., West New Brighton, N. Y.

Interstate Engineering Co., Bedford, O.  
Jeffrey Mfg. Co., Columbus, O.  
W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.  
A. Leschen & Sons Rope Co., St. Louis.  
Otis Elevator Co., Railway Exchange, Chicago, Ill.

Robins Conveying Belt Co., 17-22 Park Row, New York.

J. G. Speidel, Reading, Pa.  
Storm Mfg. Co., Newark, N. J.  
Warsaw Elevator Co., Warsaw, N. Y.  
Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

Wellman-Seaver-Morgan Co., Cleveland, O.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Elevator Bolts, Buckets, &c.**  
(See Bolts, Buckets, &c.)

**Elevator Bucket Attachments, to order—**

W. J. Clark & Co., Salem, O.

**Elevator Bucket Pumps—**

(See Pumps, Elevator Bucket and Purifying Pumps.)

**Elevator Buckets and Cups—**  
(See Buckets and Cups, Elevator.)

**Elevator Counter Balance Weights—**  
(See Weights.)

**Elevator Enclosures—**

Andrews Wire & Iron Works, Rockford, Ill.

Buffalo Wire Works Co., Buffalo, N. Y.  
Clinton Wire Cloth Co., Clinton, Mass.  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Eastern Machinery Co., New Haven, Ct.  
Eatey Wire Works Co., 59 Fulton St., New York.

Glen Mfg. Co., Ellwood City, Pa.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Otis Elevator Co., Railway Exchange, Chicago, Ill.

Stewart Iron Works Co., Cincinnati, O.  
W. S. Tyler Co., Cleveland, O.  
Van Dorn Iron Works, Cleveland, O.  
Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

Webster & Perks Tool Co., Springfield, O.  
Wright Wire Co., Worcester, Mass.

**Elevator Scales—**

(See Scales, Grain and Elevator.)

**Elevators, Automatic Barrel—**

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

Interstate Engineering Co., Bedford, O.  
Jeffrey Mfg. Co., Columbus, O.

**Elevators, Belt—**

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. E. Caldwell Co., Louisville, Ky.  
Dodge Mfg. Co., Mishawaka, Ind.

Eastern Machinery Co., New Haven, Ct.  
Energy Elevator Co., 214 New St., Philadelphia, Pa.

Jeffrey Mfg. Co., Columbus, O.  
Main Belting Co., 1219 Carpenter St., Philadelphia, Pa.

Northern Engineering Works, Detroit, Mich.

Otis Elevator Co., Railway Exchange, Chicago, Ill.

Sidney Elevator Mfg. Co., Sidney, O.  
J. G. Speidel, Reading, Pa.

Storm Mfg. Co., Newark, N. J.  
Warner Elevator Mfg. Co., Cincinnati, O.

Warsaw Elevator Co., Warsaw, N. Y.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Elevators, Cotton—**

B. F. Sturtevant Co., Boston, Mass.

**Elevators, Electric—**

Eastern Machinery Co., New Haven, Ct.  
Northern Engineering Works, Detroit, Mich.

Otis Elevator Co., Railway Exchange, Chicago, Ill.

Sidney Elevator Mfg. Co., Sidney, O.  
J. G. Speidel, Reading, Pa.

Storm Mfg. Co., Newark, N. J.  
Warner Elevator Mfg. Co., Cincinnati, O.

Warsaw Elevator Co., Warsaw, N. Y.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Elevators, Ensilage Cutter—**

Silver Mfg. Co., Salem, O.

**Elevators, Foundry—**

Byram & Co., Detroit, Mich.  
Interstate Engineering Co., Bedford, O.

Northern Engineering Works, Detroit, Mich.

S. Obermayer Co., Cincinnati, O.

Warsaw Elevator Co., Warsaw, N. Y.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Elevators, Freight—**

Eastern Machinery Co., New Haven, Ct.  
Energy Elevator Co., 214 New St., Philadelphia, Pa.

Northern Engineering Works, Detroit, Mich.

Otis Elevator Co., Railway Exchange, Chicago, Ill.

Sidney Elevator Mfg. Co., Sidney, O.  
J. G. Speidel, Reading, Pa.

Storm Mfg. Co., Newark, N. J.  
Warner Elevator Mfg. Co., Cincinnati, O.

Warsaw Elevator Co., Warsaw, N. Y.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Elevators, Grain—**

American Bridge Co. of New York, 30 Church St., New York.

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

Jeffrey Mfg. Co., Columbus, O.

Poole Engineering & Machine Co., Baltimore, Md.  
 Riter-Conley Mfg. Co., Pittsburgh, Pa.  
 Robins Conveying Belt Co., Park Row Bldg., New York.

**Elevators, Hand Power—**  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Energy Elevator Co., 214 New St., Philadelphia, Pa.

Otis Elevator Co., Railway Exchange, Chicago, Ill.  
 Sidney Elevator Mfg. Co., Sidney, O.  
 J. G. Speidel, Reading, Pa.  
 Storm Mfg. Co., Newark, N. J.  
 Warner Elevator Mfg. Co., Cincinnati, O.  
 Warsaw Elevator Co., Warsaw, N. Y.

**Elevators, Hydraulic—**  
 Otis Elevator Co., Railway Exchange, Chicago, Ill.  
 Warner Elevator Mfg. Co., Cincinnati, O.  
 Warsaw Elevator Co., Warsaw, N. Y.

**Elevators, Ice—**  
 H. W. Caldwell & Son Co., 17th St. and Western Ave., Chicago, Ill.  
 Gifford-Wood Co., Hudson, N. Y.  
 Interstate Engineering Co., Bedford, O.

**Elevators, Invalid—**  
 Warsaw Elevator Co., Warsaw, N. Y.

**Elevators, Passenger—**  
 Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Otis Elevator Co., Railway Exchange, Chicago, Ill.  
 Sidney Elevator Mfg. Co., Sidney, O.  
 Storm Mfg. Co., Newark, N. J.  
 Warner Elevator Mfg. Co., Cincinnati, O.  
 Warsaw Elevator Co., Warsaw, N. Y.

**Elevators, Passenger, Escalator—**  
 Otis Elevator Co., Railway Exchange, Chicago, Ill.

**Elevators, Pneumatic—**  
 Northern Engineering Works, Detroit, Mich.

Otis Elevator Co., Railway Exchange, Chicago, Ill.

Whiting Foundry Equipment Co., Harvey, Ill.

**Elevators, Sidewalk—**  
 (See Hoists, Sidewalk.)

**Elevators, Steam - Hydraulic—**  
 Otis Elevator Co., Railway Exchange, Chicago, Ill.

Craig Ridgway & Son Co., Coatesville, Pa.  
**Elevators, Sugar—**  
 American Tool & Machine Co., Boston, Mass.

**Elevators, Vehicle—**  
 Energy Elevator Co., 214 New St., Philadelphia, Pa.  
 Otis Elevator Co., Railway Exchange, Chicago, Ill.

Sidney Elevator Mfg. Co., Sidney, O.  
 J. G. Speidel, Reading, Pa.  
 Warsaw Elevator Co., Warsaw, N. Y.

**Elevators, Water—**  
 H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.  
 Jeffrey Mfg. Co., Columbus, O.  
 Warsaw Elevator Co., Warsaw, N. Y.

**Embossed Brass—**  
 (See Brass.)

**Embossing Dies—**  
 (See Stamps and Dies, Steel.)

**Embossing Punches—**  
 (See Punches, Embossing.)

**Emery—**  
 Abrasive Material Co., Philadelphia, Pa.  
 American Emery Wheel Works, Providence, R. I.  
 Hamilton Emery & Corundum Co., Chester, Mass.

Keystone Emery Mills, Frankfort, Pa.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Northampton Emery Wheel Co., Leeds, Mass.

Safety Emery Wheel Co., Springfield, O.  
 Sterling Emery Wheel Mfg. Co., Tiffin, O.  
 H. A. Stiles & Co., Boston, Mass.  
 Vitriified Wheel Co., Westfield, Mass.

**Emery Bricks—**  
 Abrasive Material Co., Philadelphia, Pa.  
 American Emery Wheel Works, Providence, R. I.

Safety Emery Wheel Co., Springfield, O.  
 Sterling Emery Wheel Mfg. Co., Tiffin, O.  
 H. A. Stiles & Co., Boston, Mass.

**Emery Cloth—**  
 (See Cloth.)

**Emery Grinding Pans, Stones, &c.—**  
 (See Pans, Stones, &c.)

**Emery Rubs for Foundry Use—**

Abrasive Material Co., Philadelphia, Pa.  
 American Emery Wheel Works, Providence, R. I.  
 Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

S. Obermayer Co., Cincinnati, O.  
 Safety Emery Wheel Co., Springfield, O.  
 Sterling Emery Wheel Mfg. Co., Tiffin, O.  
 H. A. Stiles & Co., Boston, Mass.  
 Superior Corundum Wheel Co., Waltham, Mass.

Vitriified Wheel Co., Westfield, Mass.

**Employees' Time Record-ers—**  
 (See Recorders, Time.)

**Enamel Colors—**  
 Vollkommer & Co., Pittsburgh, Pa.  
**Enamelled Distributing Rings—**  
 (See Rings, Bridal Electrical.)

**Enameling—**  
 Chicago Hardware Foundry Co., North Chicago, Ill.

Cleveland Stamping & Tool Co., Cleveland, O.  
 Gender, Paeschke & Frey, Milwaukee, Wis.

John R. Keim Mills, Inc., Buffalo, N. Y.  
 H. A. Stiles & Co., Boston, Mass.

**Enamels for Sheet Steel—**  
 Vollkommer & Co., Pittsburgh, Pa.

**Enclosures, Elevator—**  
 (See Elevator Enclosures.)

**End Mills—**  
 (See Mills.)

**Ends, Rod and Yoke—**  
 (See Rod Ends, Yoke Ends.)

**Engine Bells, Governors, &c.—**  
 (See Bells, Governors, &c.)

**Engineers, Blast Furnace, Constructing—**

Garrett-Cromwell Engineering Co., Cleveland, O.

Walter Kennedy, Pittsburgh, Pa.

Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.

Ladd & Baker, Real Estate Trust Bldg., Philadelphia, Pa.

D. Lamond & Son, Pittsburgh, Pa.

Alex Laughlin & Co., Pittsburgh, Pa.

G. W. McClure, Son & Co., Pittsburgh.

Arthur G. McKee, Cleveland, O.

Mesta Machine Co., Pittsburgh, Pa.

John W. Seaver, Cleveland, O.

**Engineers, Blast Furnace, Designing—**

Garrett-Cromwell Engineering Co., Cleveland, O.

Walter Kennedy, Pittsburgh, Pa.

Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.

Ladd & Baker, Real Estate Trust Bldg., Philadelphia, Pa.

D. Lamond & Son, Pittsburgh, Pa.

Alex Laughlin & Co., Pittsburgh, Pa.

G. W. McClure, Son & Co., Pittsburgh.

Arthur G. McKee, Cleveland, O.

D. F. Nisbet, Pittsburgh, Pa.

John W. Seaver, Cleveland, O.

**Engineers, Bridge and Structural, Constructing—**

American Bridge Co. of New York, 30 Church St., New York.

Baltimore Bridge Co., Baltimore, Md.

Boston Bridge Works, Boston, Mass.

Interstate Engineering Co., Bedford, O.

Julian Kennedy, Pittsburgh, Pa.

Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.

McClintock-Marshall Construction Co., Pittsburgh, Pa.

John W. Seaver, Cleveland, O.

Lewis F. Shoemaker & Co., Harrison Bldg., Philadelphia, Pa.

Virginia Bridge & Iron Co., Roanoke, Va.

Vollkommer & Co., Pittsburgh, Pa.

**Engineers, Bridge and Structural, Designing—**

American Bridge Co. of New York, 30 Church St., New York.

Baltimore Bridge Co., Baltimore, Md.

Boston Bridge Works, Boston, Mass.

Interstate Engineering Co., Bedford, O.

Julian Kennedy, Pittsburgh, Pa.

Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.

McClintock-Marshall Construction Co., Pittsburgh, Pa.

D. F. Nisbet, Pittsburgh, Pa.

Wm. B. Scaife & Sons Co., Pittsburgh.

John W. Seaver, Cleveland, O.

Virginia Bridge & Iron Co., Roanoke, Va.

Thos. Prosser & Son, 35 Platt St., N. Y.

John W. Seaver, Cleveland, O.

**Engineers, Civil, Constructing—**

Forster-Miller Engineering Co., Pittsburgh.

Julian Kennedy, Pittsburgh, Pa.

John W. Seaver, Cleveland, O.

**Engineers, Civil, Consulting and Designing—**

Robert W. Hunt & Co., 90 West St., New York.

Julian Kennedy, Pittsburgh, Pa.

John W. Seaver, Cleveland, O.

Tasker & Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

Vollkommer & Co., Pittsburgh, Pa.

**Engineers, Constructing—**

American Bridge Co. of New York, 30 Church St., New York.

Baltimore Bridge Co., Baltimore, Md.

Belmont Iron Works, Inc., Philadelphia.

Boston Bridge Works, Boston, Mass.

Browning Engineering Co., Cleveland, O.

Fawcus Machine Co., Pittsburgh, Pa.

Forster-Miller Engineering Co., Pittsburgh.

Garrett-Cromwell Engineering Co., Cleveland, O.

E. Keeler Co., Williamsport, Pa.

Julian Kennedy, Pittsburgh, Pa.

Walter Kennedy, Pittsburgh, Pa.

D. Lamond & Son, Pittsburgh, Pa.

Alex Laughlin & Co., Pittsburgh, Pa.

Link-Belt Co., Philadelphia, Pa.

McClintock-Marshall Construction Co., Pittsburgh, Pa.

G. W. McClure, Son & Co., Pittsburgh.

Arthur G. McKee, Cleveland, O.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.

Pennsylvania Engineering Works, New Castle, Pa.

Power Equipment Co., Fisher Bldg., Chicago, Ill.

Robins Conveying Belt Co., Passaic, N. J.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

Lewis F. Shoemaker & Co., Harrison Bldg., Philadelphia, Pa.

S. R. Smythe Co., Pittsburgh, Pa.

Wm. Swindell & Bro., Pittsburgh, Pa.

Virginia Bridge & Iron Co., Roanoke, Va.

Vollkommer & Co., Pittsburgh, Pa.

Walworth Mfg. Co., Boston, Mass.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Engineers, Electrical—**

Crocker-Wheeler Co., Ampere, N. J.

General Electric Co., Schenectady, N. Y.

Arthur G. McKee, Cleveland, O.

Taylor Machinery Co., Boston, Mass.

**Engineers, Electrical, Constructing—**

Crocker-Wheeler Co., Ampere, N. J.

Morgan Engineering Co., Alliance, O.

Northern Engineering Works, Detroit, Mich.

Thomson Electric Welding Co., Lynn, Mass.

**Engineers, Foundry Constructing—**

Interstate Engineering Co., Bedford, O.

Morgan Engineering Co., Alliance, O.

Northern Engineering Works, Detroit, Mich.

John W. Seaver, Cleveland, O.

Vollkommer & Co., Pittsburgh, Pa.

Whiting Foundry Equipment Co., Harvey, Ill.

**Engineers, Heating and Ventilating—**

American Blower Co., Detroit, Mich.

E. Keeler Co., Williamsport, Pa.

B. F. Sturtevant Co., Boston, Mass.

**Engineers, Heating and Ventilating, Constructing—**

Bayley Mfg. Co., Milwaukee, Wis.

E. Keeler Co., Williamsport, Pa.



**Engineers, Hydraulic—**

Humphrey Machine Co., Keene, N. H.

**Engineers, Inspecting and Consulting—**

Garrett-Cromwell Engineering Co., Cleveland, O.

Robert W. Hunt &amp; Co., 90 West St., New York.

Morgan Construction Co., Worcester, Mass.

John W. Seaver, Cleveland, O.

Tasker &amp; Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

**Engineers, Manufacturing Plants—**

Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.

Arthur G. McKee, Cleveland, O.

Morgan Engineering Co., Alliance, O.

D. F. Nisbet, Pittsburgh, Pa.

Power Equipment Co., Fisher Bldg., Chicago, Ill.

John W. Seaver, Cleveland, O.

Shannon Engineering &amp; Contracting Co., Pittsburgh, Pa.

Virginia Bridge &amp; Iron Co., Roanoke, Va.

Vollkommer &amp; Co., Pittsburgh, Pa.

**Engineers, Marine—**

Tasker &amp; Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

**Engineers, Mechanical—**

Dodge Mfg. Co., Mishawaka, Ind.

Fawcett Machine Co., Pittsburgh, Pa.

Forster-Miller Engineering Co., Pittsburgh.

Garrett-Cromwell Engineering Co., Cleveland, O.

Globe Machine &amp; Stamping Co., Cleveland, O.

Robert W. Hunt &amp; Co., 90 West St., New York.

Walter Kennedy, Pittsburgh, Pa.

Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.

Otto Konigslow Mfg. Co., Cleveland, O.

D. Lamond &amp; Son, Pittsburgh, Pa.

Link-Belt Co., Philadelphia, Pa.

G. W. McClure, Son &amp; Co., Pittsburgh, Pa.

Arthur G. McKee, Cleveland, O.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.

D. F. Nisbet, Pittsburgh, Pa.

Pacific Iron Works, Bridgeport, Ct.

Poole Engineering &amp; Machine Co., Baltimore, Md.

Power Specialty Co., 111 Broadway, New York.

Shannon Engineering &amp; Contracting Co., Pittsburgh, Pa.

Tasker &amp; Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

Walworth Mfg. Co., Boston, Mass.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Engineers, Mechanical, Constructing—**

Dodge Mfg. Co., Mishawaka, Ind.

Forster-Miller Engineering Co., Pittsburgh, Pa.

Garrett-Cromwell Engineering Co., Cleveland, O.

Globe Machine &amp; Stamping Co., Cleveland, O.

W. A. Jones Foundry &amp; Machine Co.,

142-164 W. North Ave., Chicago, Ill.

Julian Kennedy, Pittsburgh, Pa.

Walter Kennedy, Pittsburgh, Pa.

Otto Konigslow Mfg. Co., Cleveland, O.

Ladd &amp; Baker, Inc., Broad and Chestnut Sts., Philadelphia, Pa.

D. Lamond &amp; Son, Pittsburgh, Pa.

G. W. McClure, Son &amp; Co., Pittsburgh.

Arthur G. McKee, Cleveland, O.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.

D. F. Nisbet, Pittsburgh, Pa.

Northern Engineering Works, Detroit, Mich.

Pacific Iron Works, Bridgeport, Ct.

Pennsylvania Engineering Works, New Castle, Pa.

Power Specialty Co., 111 Broadway, New York.

Robins Conveying Belt Co., Park Row Bldg., New York.

A. L. Schultz &amp; Son, 570-572 Elston Ave., Chicago, Ill.

John W. Seaver, Cleveland, O.

Shannon Engineering &amp; Contracting Co., Pittsburgh, Pa.

S. R. Smythe Co., Pittsburgh, Pa.

Southern Engine &amp; Boiler Works, Jackson, Tenn.

Wm. Swindell &amp; Bros., Pittsburgh, Pa.

Vilter Mfg. Co., Milwaukee, Wis.

A. O. Walworth &amp; Co., 143-147 Clinton St., Chicago, Ill.

Wellman-Seaver-Morgan Co., Cleveland, O.

Wellman-Seaver-Morgan Co., Cleveland, O.

Dodge Mfg. Co., Mishawaka, Ind.

Garrett-Cromwell Engineering Co., Cleveland, O.

Julian Kennedy, Pittsburgh, Pa.

Walter Kennedy, Pittsburgh, Pa.

Otto Konigslow Mfg. Co., Cleveland, O.

G. W. McClure, Son &amp; Co., Pittsburgh.

Arthur G. McKee, Cleveland, O.

Morgan Construction Co., Worcester, Mass.

D. F. Nisbet, Pittsburgh, Pa.

Pacific Iron Works, Bridgeport, Ct.

Power Specialty Co., 111 Broadway, New York.

Shannon Engineering &amp; Contracting Co., Pittsburgh, Pa.

S. R. Smythe Co., Pittsburgh, Pa.

Tasker &amp; Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

Taylor Machinery Co., Boston, Mass.

Wellman-Seaver-Morgan Co., Cleveland, O.

C. C. Wormer Machinery Co., Detroit, Mich.

Wellman-Seaver-Morgan Co., Cleveland, O.

Wellman-Seaver-Morgan Co., Cleveland, O.

Wellman-Seaver-Morgan Co., Cleveland, O.

Wellman-Seaver-Morgan Co., Cleveland, O.

Morgan Construction Co., Worcester, Mass.  
Morgan Engineering Co., Alliance, O.  
D. F. Nisbet, Pittsburgh, Pa.  
Northern Engineering Works, Detroit, Mich.

Pacific Iron Works, Bridgeport, Ct.  
Pennsylvania Engineering Works, New Castle, Pa.

Power Specialty Co., 111 Broadway, New York.

Robins Conveying Belt Co., Park Row Bldg., New York.

John W. Seaver, Cleveland, O.  
Shannon Engineering & Contracting Co., Pittsburgh, Pa.

Wm. Swindell & Bros., Pittsburgh, Pa.

Tasker & Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

Vollkommer & Co., Pittsburgh, Pa.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Engineers, Metallurgical—**  
Garrett-Cromwell Engineering Co., Cleveland, O.

Robert W. Hunt & Co., 90 West St., New York.

Jerome Keeley & Co., 421 Chestnut St., Philadelphia, Pa.

Ladd & Baker, Inc., Broad and Chestnut Sts., Philadelphia, Pa.

Morgan Construction Co., Worcester, Mass.

Henry Souther Engineering Co., Hartford, Ct.

Wellman-Seaver-Morgan Co., Cleveland.

**Engineers, Mining—**  
Jerome Keeley & Co., 421 Chestnut St., Philadelphia, Pa.

Tasker & Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

Wellman-Seaver-Morgan Co., Cleveland.

**Engineers, Rod Mill, Constructing—**  
Garrett-Cromwell Engineering Co., Cleveland, O.

Morgan Construction Co., Worcester, Mass.

**Engineers, Rod Mill, Consulting—**  
Garrett-Cromwell Engineering Co., Cleveland, O.

Morgan Construction Co., Worcester, Mass.

**Engineers, Rod Mill, Designing—**  
Garrett-Cromwell Engineering Co., Cleveland, O.

Morgan Construction Co., Worcester, Mass.

**Engineers, Steel Buildings—**  
Arthur G. McKee, Cleveland, O.

D. F. Nisbet, Pittsburgh, Pa.

John W. Seaver, Cleveland, O.

Vollkommer & Co., Pittsburgh, Pa.

**Engineers, Steel Works and Rolling Mills—**  
Forster-Miller Engineering Co., Pittsburgh, Pa.

Garrett-Cromwell Engineering Co., Cleveland, O.

Julian Kennedy, Pittsburgh, Pa.

Walter Kennedy, Pittsburgh, Pa.

Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.

Arthur G. McKee, Cleveland, O.

G. W. McClure, Son & Co., Pittsburgh, Pa.  
Mesta Machine Co., Pittsburgh, Pa.  
Morgan Engineering Co., Alliance, O.  
Morgan Construction Co., Worcester, Mass.

D. F. Nisbet, Pittsburgh, Pa.

S. R. Smythe Co., Pittsburgh, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Vollkommer & Co., Pittsburgh, Pa.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey, Ill.

**Engineers, Steel Works and Rolling Mills, Constructing—**  
Forster-Miller Engineering Co., Pittsburgh, Pa.

Garrett-Cromwell Engineering Co., Cleveland, O.

Julian Kennedy, Pittsburgh, Pa.

Walter Kennedy, Pittsburgh, Pa.

Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.

Ladd & Baker, Real Estate Trust Bldg., Philadelphia, Pa.

Alex. Laughlin & Co., Pittsburgh, Pa.

G. W. McClure, Son & Co., Pittsburgh, Pa.

Arthur G. McKee, Cleveland, O.

Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.

D. F. Nisbet, Pittsburgh, Pa.

Northern Engineering Works, Detroit, Mich.

Pennsylvania Engineering Works, New Castle, Pa.

John W. Seaver, Cleveland, O.

S. R. Smythe Co., Pittsburgh, Pa.

Wm. Swindell & Bros., Pittsburgh, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Vollkommer & Co., Pittsburgh, Pa.

**Engineers, Steel Works and Rolling Mills, Designing—**  
Garrett-Cromwell Engineering Co., Cleveland, O.

Julian Kennedy, Pittsburgh, Pa.

Walter Kennedy, Pittsburgh, Pa.

Kenwood Bridge Co., First National Bank Building, Chicago, Ill.

Ladd & Baker, Real Estate Trust Bldg., Philadelphia, Pa.

Alex. Laughlin & Co., Pittsburgh, Pa.

G. W. McClure, Son & Co., Pittsburgh, Pa.

Arthur G. McKee, Cleveland, O.

Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.

D. F. Nisbet, Pittsburgh, Pa.

Pennsylvania Engineering Works, New Castle, Pa.

S. R. Smythe Co., Pittsburgh, Pa.  
Wm. Swindell & Bros., Pittsburgh, Pa.  
United Engineering & Foundry Co.,  
Pittsburgh, Pa.

Vollkommer & Hagan, Pittsburgh, Pa.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**Engineers, Steel Works and  
Rolling Mills. Inspecting—**  
Garrett-Cromwell Engineering Co., Cleve-  
land, O.

Julius Kennedy, Pittsburgh, Pa.  
Walter Kennedy, Pittsburgh, Pa.  
G. W. McClure, Son & Co., Pittsburgh,  
Arthur G. McKee, Cleveland, O.  
Morgan Construction Co., Worcester, Mass.  
D. F. Nisbet, Pittsburgh, Pa.  
Wellman-Seaver-Morgan Co., Cleveland, O.

### **Engineers—**

#### **MERCHANTS.**

W. R. Beatty Machinery & Equipment  
Co., Pittsburgh, Pa.  
Charles Behlen, 72 Trinity Place, N. Y.  
Carlin Machinery & Supply Co., N. S.  
Pittsburgh, Pa.

Cleveland Belting & Machine Co., Cleve-  
land, O.

W. P. Davis Machine Co., Rochester,  
N. Y.

Barclay M. Everson, Pittsburgh, Pa.  
Green Fuel Economizer Co., Matteawan,  
N. Y.

Hannan-Finton Co., Springfield, Mass.  
Cat. Hirsch & Sons Iron & Rail Co. St.  
Louis, Mo.

W. C. Johnson & Sons Machinery Co.,  
St. Louis, Mo.

McDowell & Co., Allegheny, Pa.  
MacGovern, Archer & Co., 114 Liberty  
St., New York.

W. G. McKenney & Co., Pittsburgh, Pa.  
Edgar M. Moore & Co., Pittsburgh, Pa.

Norton Machinery Co., Cincinnati, O.  
Pfannmueller Engineering Co., First Na-  
tional Bank Bldg., Chicago, Ill.

F. R. Phillips & Sons Co., Pennsylvania  
Bldg., Philadelphia, Pa.

Power Equipment Co., Fisher Bldg., Chi-  
cago, Ill.

F. P. Schlelein Machinery Co., Pitts-  
burgh, Pa.

A. L. Schultz & Son, 579-572 Elston Ave.,  
Chicago, Ill.

L. F. Seyfert's Sons, Inc., 437-441 N. 3d  
St., Philadelphia, Pa.

Frank Toomey, 127-131 No. 3d St., Phila-  
delphia, Pa.

Jacob Ullman, Buffalo, N. Y.

Wickes Bros., Saginaw, Mich.

Woodward, Wight & Co., Ltd., New Or-  
leans, La.

C. C. Wormer Machinery Co., Detroit,  
Mich.

Yearsley & Levene, 305 N. 3d St., Phila-  
delphia, Pa.

### **Engines, Agricultural Gas- oline—**

American Well Works, Aurora, Ill.  
Charter Gas Engine Co., Sterling, Ill.  
Du Bois Iron Works, Du Bois, Pa.  
Foos Gas Engine Co., Springfield, O.  
Grant Mfg. & Machine Co., Bridgeport,  
Ct.

Varside Engine Co., Oil City, Pa.

### **Engines, Agricultural Steam—**

Wickes Bros., Saginaw, Mich.

### **Engines, Air—**

American Well Works, Aurora, Ill.  
Ingersoll-Rand Co., 11 Broadway, New  
York.

John H. McGowan Co., Cincinnati, O.  
Mesta Machine Co., Pittsburgh, Pa.

Southwark Foundry & Machine Co., Phil-  
adelphia, Pa.

Stow Flexible Shaft Co., 26th and Callow-  
hill Sts., Philadelphia, Pa.

Sullivan Machinery Co., Railway Ex-  
change Bldg., Chicago, Ill.

Robt. Wetherill & Co., Chester, Pa.

### **Engines, Alcohol—**

American Well Works, Aurora, Ill.  
Charter Gas Engine Co., Sterling, Ill.

Du Bois Iron Works, Du Bois, Pa.  
Foos Gas Engine Co., Springfield, O.

Grant Mfg. & Machine Co., Bridgeport,  
Ct.

### **Engines, Automobile Gas- oline—**

Foos Gas Engine Co., Springfield, O.  
Otto Konigsloew Mfg. Co., Cleveland, O.

Pacific Iron Works, Bridgeport, Ct.  
Reeves Pulley Co., Columbus, Ind.

Sheffield Car Co., Three Rivers, Mich.

### **Engines, Automobile Steam—**

Mason Regulator Co., Boston, Mass.

### **Engines, Blowing—**

Buckeye Engine Co., Salem, O.  
Mackintosh, Hemphill & Co., Pittsburgh,  
Pa.

Mesta Machine Co., Pittsburgh, Pa.  
Morgan Engineering Co., Alliance, O.

Southwark Foundry & Machine Co.,  
Philadelphia, Pa.

Wickes Bros., Saginaw, Mich.

### **Engines, Blowing, Gas—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
Buckeye Engine Co., Salem, O.

### **Engines, Condensing—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
Buckeye Engine Co., Salem, O.

Buffalo Forge Co., Buffalo, N. Y.  
Mackintosh, Hemphill & Co., Pittsburgh,  
Pa.

Mesta Machine Co., Pittsburgh, Pa.  
Newport News Ship Building & Dry Dock  
Co., Newport News, Va.

Southwark Foundry & Machine Co., Phil-  
adelphia, Pa.

B. F. Sturtevant Co., Boston, Mass.  
Sullivan Machinery Co., Railway Ex-  
change Bldg., Chicago, Ill.

Vilter Mfg. Co., Milwaukee, Wis.  
Robt. Wetherill & Co., Chester, Pa.

Wickes Bros., Saginaw, Mich.

### **Engines, Converted Steam to Gas—**

S. G. Milton & Son, Franklin, Pa.

### **Engines, Corliss—**

Thomas Carlin's Sons Co., N. S. Pitts-  
burgh, Pa.

Mackintosh, Hemphill & Co., Pittsburgh,  
Pa.

Mesta Machine Co., Pittsburgh, Pa.  
Pacific Iron Works, Bridgeport, Ct.

Southern Engine & Boiler Works, Jack-  
son, Tenn.

Southwark Foundry & Machine Co., Philadelphia, Pa.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.  
Vilter Mfg. Co., Milwaukee, Wis.  
Robt. Wetherill & Co., Chester, Pa.  
Wickes Bros., Saginaw, Mich.

#### Engines, Cross Compound—

Bethlehem Steel Co., So. Bethlehem, Pa.  
Buckeye Engine Co., Salem, O.  
Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.  
Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Mesta Machine Co., Pittsburgh, Pa.  
Newport News Ship Building & Dry Dock Co., Newport News, Va.

Southwark Foundry & Machine Co., Philadelphia, Pa.

B. F. Sturtevant Co., Boston, Mass.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.  
Vilter Mfg. Co., Milwaukee, Wis.  
Robt. Wetherill & Co., Chester, Pa.  
Wickes Bros., Saginaw, Mich.

#### Engines, Deep Well Pumping—

American Well Works, Aurora, Ill.  
Bovaird & Co., Bradford, Pa.  
Charter Gas Engine Co., Sterling, Ill.  
Dale Engine & Supply Co., Ltd., Franklin, Pa.

Deming Co., Salem, O.  
John H. McGowan Co., Cincinnati, O.  
Wickes Bros., Saginaw, Mich.

#### Engines, Fire—

American Well Works, Aurora, Ill.  
Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Goulds Mfg. Co., Seneca Falls, N. Y.

#### Engines, Garden—

W. & B. Douglas, Middletown, Ct.

#### Engines, Gas and Gasoline—

American Well Works, Aurora, Ill.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Bovaird & Co., Bradford, Pa.  
Buckeye Engine Co., Salem, O.  
Buffalo Forge Co., Buffalo, N. Y.  
Charter Gas Engine Co., Sterling, Ill.  
Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.

Du Bois Iron Works, Du Bois, Pa.  
Foos Gas Engine Co., Springfield, O.  
Grant Mfg. & Machine Co., Bridgeport, Ct.

Otto Koenigslow Mfg. Co., Cleveland, O.  
Mesta Machine Co., Pittsburgh, Pa.  
S. G. Milton & Son, Franklin, Pa.  
Reeves Pulley Co., Columbus, Ind.  
Riverside Engine Co., Oil City, Pa.  
Tasker & Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

#### Engines, Gas and Gasoline, Hoisting—

Charter Gas Engine Co., Sterling, Ill.  
Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.  
Du Bois Iron Works, Du Bois, Pa.

Foos Gas Engine Co., Springfield, O.  
Tasker & Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

#### Engines, Gas and Gasoline Launch—

Automatic Machine Co., Bridgeport, Ct.  
Charter Gas Engine Co., Sterling, Ill.  
Clipper Lawn Mower Co., Dixon, Ill.  
Dodge Mfg. Co., Mishawaka, Ind.  
Otto Koenigslow Mfg. Co., Cleveland, O.  
Sheffield Car Co., Three Rivers, Mich.  
Tasker & Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

#### Engines, Gas and Gasoline Pumping—

American Well Works, Aurora, Ill.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Charter Gas Engine Co., Sterling, Ill.  
Dale Engine & Supply Co., Ltd., Franklin, Pa.

Deming Co., Salem, O.  
Du Bois Iron Works, Du Bois, Pa.  
Foos Gas Engine Co., Springfield, O.  
Riverside Engine Co., Oil City, Pa.  
Tasker & Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

#### Engines, Gas, Natural, Furnace or Producer Gas—

Bethlehem Steel Co., So. Bethlehem, Pa.  
Buckeye Engine Co., Salem, O.  
Du Bois Iron Works, Du Bois, Pa.  
Foos Gas Engine Co., Springfield, O.

#### Engines, Gasoline, Portable—

Charter Gas Engine Co., Sterling, Ill.  
Du Bois Iron Works, Du Bois, Pa.  
Foos Gas Engine Co., Springfield, O.

#### Engines, High Speed Horizontal—

American Well Works, Aurora, Ill.  
Bayley Mfg. Co., Milwaukee, Wis.  
Buffalo Forge Co., Buffalo, N. Y.  
Southwark Foundry & Machine Co., Philadelphia, Pa.

#### Engines, High Speed Vertical—

American Blower Co., Detroit, Mich.  
American Well Works, Aurora, Ill.  
Bayley Mfg. Co., Milwaukee, Wis.  
Buckeye Engine Co., Salem, O.  
Buffalo Forge Co., Buffalo, N. Y.  
Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.  
New Britain Machine Co., New Britain, Ct.

Sheffield Car Co., Three Rivers, Mich.  
Southwark Foundry & Machine Co., Philadelphia, Pa.

B. F. Sturtevant Co., Boston, Mass.

Wickes Bros., Saginaw, Mich.  
**Engines, Hoisting, Mine—**  
Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.

Charter Gas Engine Co., Sterling, Ill.  
Lidgerwood Mfg. Co., 96 Liberty St., N. Y.  
Northern Engineering Works, Detroit, Mich.

Pacific Iron Works, Bridgeport, Ct.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.

Vilter Mfg. Co., Milwaukee, Wis.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
Wickes Bros., Saginaw, Mich.

**Engines, Hoisting, Pneumatic**

Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.  
 Ingersoll-Rand Co., 11 Broadway, New York.  
 Northern Engineering Works, Detroit, Mich.  
 Stow Flexible Shaft Co., 26th & Callowhill Sta., Philadelphia, Pa.  
 Wellman-Seaver-Morgan Co., Cleveland, O.

**Engines, Hoisting, Steam**

Bethlehem Steel Co., So. Bethlehem, Pa.  
 Brown Hoisting Machinery Co., Cleveland, O.  
 Browning Engineering Co., Cleveland, O.  
 Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.  
 Thomas P. Conard & Co., 119 So. 4th St., Philadelphia, Pa.  
 Du Bois Iron Works, Du Bois, Pa.  
 C. W. Hunt Co., West New Brighton, N. Y.

Lidgerwood Mfg. Co., 96 Liberty St., N.Y.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Pacific Iron Works, Bridgeport, Ct.  
 Soule Steam Feed Works, Meridian, Miss.  
 Southern Engine & Boiler Works, Jackson, Tenn.

Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 Wickes Bros., Saginaw, Mich.

**Engines, Hydraulic**

(See Motors, Water.)

**Engines, Hydrocarbon, Ignition Apparatus for**

Baker & Co., Inc., Newark, N. J.

**Engines, Kerosene**

Du Bois Iron Works, Du Bois, Pa.

**Engines, Marine**

Automatic Machine Co., Bridgeport, Ct.  
 Charter Gas Engine Co., Sterling, Ill.  
 Clipper Lawn Mower Co., Dixon, Ill.  
 Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.  
 Newport News Ship Building & Dry Dock Co., Newport News, Va.  
 Tasker & Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

**Engines, Oil**

Du Bois Iron Works, Du Bois, Pa.  
 Tasker & Strawbridge, Pennsylvania Bldg., Philadelphia, Pa.

**Engines, Portable**

American Well Works, Aurora, Ill.  
 Bovaird & Co., Bradford, Pa.  
 Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.  
 Charter Gas Engine Co., Sterling, Ill.  
 Du Bois Iron Works, Du Bois, Pa.  
 Lidgerwood Mfg. Co., 96 Liberty St., N.Y.  
 Southern Engine & Boiler Works, Jackson, Tenn.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Wickes Bros., Saginaw, Mich.

**Engines, Producer Gas**

Bethlehem Steel Co., So. Bethlehem, Pa.  
 Buckeye Engine Co., Salem, O.  
 Du Bois Iron Works, Du Bois, Pa.  
 Foote Gas Engine Co., Springfield, O.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Riverside Engine Co., Oil City, Pa.

**Engines, Pumping Compound**

American Well Works, Aurora, Ill.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Buffalo Forge Co., Buffalo, N. Y.  
 John H. McGowan Co., Cincinnati, O.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Newport News Ship Building & Dry Dock Co., Newport News, Va.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Robt. Wetherill & Co., Chester, Pa.  
 Wickes Bros., Saginaw, Mich.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Engines, Pumping, Geared**

American Well Works, Aurora, Ill.  
 Buckeye Engine Co., Salem, O.  
 Charter Gas Engine Co., Sterling, Ill.  
 Dale Engine & Supply Co., Ltd., Franklin, Pa.  
 Du Bois Iron Works, Du Bois, Pa.  
 Grant Mfg. & Machine Co., Bridgeport, Ct.  
 John H. McGowan Co., Cincinnati, O.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Riverside Engine Co., Oil City, Pa.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Engines, Pumping, Triple Expansion**

Bethlehem Steel Co., So. Bethlehem, Pa.  
 Buffalo Forge Co., Buffalo, N. Y.  
 John H. McGowan Co., Cincinnati, O.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Newport News Ship Building & Dry Dock Co., Newport News, Va.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Robt. Wetherill & Co., Chester, Pa.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Engines, Reversing, Mill**

Mackintosh, Hemphill & Co., Pittsburgh, Pa.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Riverside Engine Co., Oil City, Pa.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Robt. Wetherill & Co., Chester, Pa.

**Engines, Rolling Mill**

Buckeye Engine Co., Salem, O.  
 Mackintosh, Hemphill & Co., Pittsburgh, Pa.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Pacific Iron Works, Bridgeport, Ct.  
 Riverside Engine Co., Oil City, Pa.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Robert Wetherill & Co., Chester, Pa.  
 Wickes Bros., Saginaw, Mich.

**Engines, Rotary Steam**

Soule Steam Feed Works, Meridian, Miss.  
**Engines, Steeple Compound**  
 Charles F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.  
 C. W. Hunt Co., West New Brighton, N. Y.

John H. McGowan Co., Cincinnati, O.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Newport News Ship Building & Dry Dock Co., Newport News, Va.

**Engines, Tandem Compound**

Buckeye Engine Co., Salem, O.

Buffalo Forge Co., Buffalo, N. Y.  
 Chas. F. Elmes Engineering Works, 23-  
 259 Fulton St., Chicago, Ill.  
 John H. McGowan Co., Cincinnati, O.  
 Mackintosh, Hemphill & Co., Pittsburgh,  
 Pa.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Newport News Ship Building & Dry Dock  
 Co., Newport News, Va.  
 Southwark Foundry & Machine Co.,  
 Philadelphia, Pa.  
 Sullivan Machinery Co., Railway Ex-  
 change Bldg., Chicago, Ill.  
 Vilter Mfg. Co., Milwaukee, Wis.  
 Robt. Wetherill & Co., Chester, Pa.  
 Wickes Bros., Saginaw, Mich.  
**Engines, Track—**  
 Sheffield Car Co., Three Rivers, Mich.  
**Engines, Traction—**  
 American Well Works, Aurora, Ill.  
**Engines, Turbine, Steam—**  
 General Electric Co., Schenectady, N. Y.  
 Oliver Machinery Co., Grand Rapids,  
 Mich.  
 B. F. Sturtevant Co., Boston, Mass.  
**Engines, Turbine, Steam.**  
**for Marine Work—**  
 Newport News Ship Building & Dry Dock  
 Co., Newport News, Va.  
**Engravers and Designers—**  
 A. Mugford, Hartford, Ct.  
 Schwerdtle Stamp Co., Bridgeport, Ct.  
**Engravers' or Sign Brass—**  
 (See Brass, Sign.)  
**Engraving, Brass and**  
**Steel—**  
 Schwerdtle Stamp Co., Bridgeport, Ct.  
**Engraving Lathes, Roll—**  
 (See Lathes, Roll Engraving.)  
**Engraving, Photo. Half-**  
**tone and Wood—**  
 A. Mugford, Hartford, Ct.  
**Ensilage and Feed Cutters—**  
 (See Cutters, Feed.)  
**Ensilage Cutter Elevators—**  
 (See Elevators, Ensilage Cutter.)  
**Entrances, Cemetery and**  
**Park—**  
 (See Fencing, Gates, &c.)  
**Envelope Folding Ma-**  
**chines—**  
 (See Folding Machines.)  
**Equipment, Telegraph and**  
**Telephone Pole Line—**  
 (See Telegraph and Telephone Pole Line  
 Equipment.)  
**Erasers—**  
 Landers, Fry & Clark, New Britain, Ct.  
 Wiebusch & Hilger, Ltd., 106-110 Lafay-  
 ette St., New York.  
**Erasers, Rubber—**  
 Jos. Dixon Crucible Co., Jersey City,  
 N. J.  
 Keuffel & Esser Co., 127 Fulton St., N.Y.  
**Escapes, Fire—**  
 Bethlehem Foundry & Machine Co.  
 South Bethlehem, Pa.  
 Chattanooga Roofing & Foundry Co.,  
 Chattanooga, Tenn.  
 Enterprise Foundry & Fence Co., Indian-  
 apolis, Ind.  
 Exeter Machine Works, Exeter, N. H.  
 Forest City Steel & Iron Co., Cleveland, O.  
 Glen Mfg. Co., Ellwood City, Pa.  
 G. Haarmann & Son, Holyoke, Mass.  
 W. N. Kratzer & Co., Pittsburgh, Pa.

Fred J. Meyers Mfg. Co., Hamilton, O.  
 Stewart Iron Works Co., Cincinnati, O.  
 Van Dorn Iron Works Co., Cleveland, O.  
 Woodward, Wight & Co., New Orleans,  
 La.  
 Writ Wire Co., Worcester, Mass.  
**Escutcheon Pins—**  
 (See Pins.)  
**Escutcheons—**  
 Jos. Bardsley, 147-151 Baxter St., N. Y.  
 M. F. Cahill, Boston, Mass.  
 Eagle Lock Co., Terryville, Ct.  
 Piqua Handle & Mfg. Co., Piqua, O.  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette  
 St., New York.  
 Taylor & Boggis Foundry Co., Cleve-  
 land, O.  
 Yale & Towne Mfg. Co., 9 Murray St.,  
 New York.  
**Evaporators—**  
 Buffalo Foundry & Machine Co., Buffalo,  
 N. Y.  
**Excavating Machinery—**  
 Ingersoll-Rand Co., 11 Broadway, N. Y.  
 Jeffrey Mfg. Co., Columbus, O.  
 Kilbourne & Jacobs Mfg. Co., Colum-  
 bus, O.  
 Lidgerwood Mfg. Co., 96 Liberty St., N. Y.  
 Sullivan Machinery Co., Railway Ex-  
 change Bldg., Chicago, Ill.  
 Wellman-Seaver-Morgan Co., Cleveland.  
**Exhaust Heads—**  
 (See Heads, Exhaust.)  
**Exhausters—**  
 (See Fans.)  
**Exhausters, Gas—**  
 American Blower Co., Detroit, Mich.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Connersville Blower Co., Connersville, Ind.  
 B. F. Sturtevant Co., Boston, Mass.  
**Expanders, Bicycle—**  
 (See Bicycle Expanders.)  
**Expanders, Screw—**  
 Star Expansion Bolt Co., 147-149 Cedar  
 St., New York.  
**Expanders, Tube—**  
 Chicago Pneumatic Tool Co., Fisher  
 Bldg., Chicago, Ill.  
 Richard Dudgeon, 24 Columbia St., N. Y.  
 Helwig Mfg. Co., St. Paul, Minn.  
 A. L. Henderer's Sons, Wilmington, Del.  
 Manning, Maxwell & Moore, Inc., 85 Lib-  
 erty St., New York.  
 W. H. Nicholson & Co., Wilkes-Barre, Pa.  
 Thomas Prosser & Son, 26 Platt St., N.Y.  
 Watson-Stillman Co., 50 Church St.,  
 New York.  
**Expanders, Tube, Pneu-**  
**matic—**  
 Helwig Mfg. Co., St. Paul, Minn.  
 A. L. Henderer's Sons, Wilmington, Del.  
**Expanding Dies, Adjust-**  
**able—**  
 (See Dies, Adjustable Expanding.)  
**Expansion Augers, Bits,**  
**Bolts, &c.—**  
 (See Augers, Bits, Bolts, &c.)  
**Expansions for Lat Screws—**  
 (See Shields, Expansion Bolt.)  
**Experimental Work—**  
 (See Model and Experimental Work.)  
**Explosives, Cartridge, Cane**  
**Tip—**  
 Susquehanna Casting Co., Wrightsville,  
 Pa.

- Exploders, Toy Bomb—**  
(See Toy Bomb Exploders.)
- Extension Bit Holders.**  
**Braces, Gates—**  
(See Holders, Braces, Gates.)
- Extensions for Bits—**  
(See Holders, Extension Bit.)
- Extinguishers, Fire—**  
E. B. Badger & Sons Co., Boston, Mass.  
Ireland & Matthews Mfg. Co., Detroit, Mich.  
Royal Mfg. Co., Lancaster, Pa.
- Extinguishers, Lamp—**  
M. F. Cahill, Boston, Mass.  
U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.
- Extractors, Centrifugal—**  
American Tool & Machine Co., Boston.
- Extractors, Coffee—**  
J. S. Dunlap, 215-219 S. Clinton St., Chicago, Ill.
- Extractors, Juice—**  
Wrightsville Hardware Co., Wrightsville, Pa.
- Extractors or Disorggers.**  
**Fish Hook—**  
Andrew B. Hendryx Co., New Haven, Ct.
- Extractors, Tap—**  
Walton Co., Hartford, Ct.
- Extractors, Weed—**  
F. E. Kohler & Co., Canton, O.
- Eye Beam—**  
Zeh & Hahnemann Co., Newark, N. J.
- Eye Bolt Machines—**  
Williams, White & Co., Moline, Ill.
- Eye Bolts, Trolley—**  
(See Trolley Materials, Electric.)
- Eye Hoes—**  
(See Hoes, Eye)
- Eye Shields, Mica—**  
J. W. Paxson Co., Philadelphia, Pa.
- Eyelet Machines—**  
Blake & Johnson Co., Waterbury, Ct.  
E. J. Manville Machine Co., Waterbury, Ct.
- Eyelet Punches—**  
(See Punches, Eyelet and Fastener.)
- Eyelets, Metallic—**  
M. F. Cahill, Boston, Mass.
- Eyes and Rings, Cock—**  
Waterbury Brass Co., Waterbury, Ct.
- Eyes and Rings, Neck Yoke—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Eyes, Cock—**  
Covert Mfg. Co., Troy, N. Y.
- Eyes, Dead, Bull's, &c.—**  
Boston & Lockport Block Co., East Boston, Mass.
- Eyes, Derrick, Dead—**  
(See Eyes, Dead, Bull's, &c.)
- Eyes, Drifting Pick—**  
Hubbard & Co., Pittsburgh, Pa.
- Eyes, Hinge—**  
Western Foundry & Sash Weight Co., 2d and Miller Sts., St. Louis, Mo.
- Eyes, Hot House or Garden—**  
Parker Wire Goods Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.
- Eyes, Railroad Pick—**  
Hubbard & Co., Pittsburgh, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Eyes, Shutter—**  
Diamond Expansion Bolt Co., 90 West St., New York.  
Diamond Expansion Bolt Co., 9-15 Mur ray St., New York.
- Eyes, Storm Window, Wire—**  
Wire Goods Co., Worcester, Mass.
- Eyes, Wire Screw—**  
(See Wire Goods, Bright.)
- Face Plate Jaws—**  
(See Jaws, Face Plate.)
- Face Plates, Lathe—**  
Union Mfg. Co., New Britain, Ct.
- Facing Machines, Candle Pine—**  
Adell Bros. Mfg. Co., Orange, Mass.
- Facing Machines, Nut—**  
Acme Machinery Co., Cleveland, O.  
Detrick & Harvey Machine Co., Baltimore, Md.
- Facing Machines, Co., Tiffin, O.**  
Niles-Bement-Pond Co., 111 Broadway, New York.
- Facings, Foundry—**  
Joa. Dixon Crucible Co., Jersey City, N. J.  
International Acheson Graphite Co., Niagara Falls, N. Y.
- S. Obermayer Co., Cincinnati, O.**  
J. W. Paxson Co., Philadelphia, Pa.  
Springfield Facing Co., Springfield, Mass.  
Western Foundry Supply Co., 50 Church St., New York.
- Factory Buckets, Tubs, Tanks—**  
(See Buckets, Tubs, Tanks.)
- Factory Scales—**  
(See Scales, Dormant and Warehouse.)
- Family Grindstones.**  
**Scales—**  
(See Grindstones, Scales.)
- Fan Motors, Electric—**  
(See Motors, Electric Fan.)
- Fancy Chains—**  
(See Chains, Wagon and Fancy.)
- Fans—**  
American Blower Co., Detroit, Mich.  
Bayley Mfg. Co., Milwaukee, Wis.  
Boston Blower Co., Hyde Park, Mass.  
Buffalo Forge Co., Buffalo, N. Y.  
Champion Blower & Forge Co., Lancaster, Pa.
- Exeter Machine Works, Exeter, N. H.**  
Green Fuel Economizer Co., Matteawan, N. Y.
- Howard & Morse, 45 Fulton St., N. Y.**  
Sterling Blower & Pipe Mfg. Co., Hartford, Ct.
- B. F. Sturtevant Co., Boston, Mass.**  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.
- Fans, Electric—**  
American Blower Co., Detroit, Mich.  
Bayley Mfg. Co., Milwaukee, Wis.  
Boston Blower Co., Hyde Park, Mass.  
Buffalo Forge Co., Buffalo, N. Y.  
Crocker-Wheeler Co., Ampere, N. J.
- Fort Wayne Electric Works, Fort Wayne, Ind.**  
General Electric Co., Schenectady, N. Y.  
Green Fuel Economizer Co., Matteawan, N. Y.
- Howard & Morse, 45 Fulton St., N. Y.**  
B. F. Sturtevant Co., Boston, Mass.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Fans, Exhaust—**

American Blower Co., Detroit, Mich.  
Bayley Mfg. Co., Milwaukee, Wis.  
Boston Blower Co., Hyde Park, Mass.  
Buffalo Forge Co., Buffalo, N. Y.  
Champion Blower & Forge Co., Lancaster, Pa.  
Geo. F. Clark Co., Windsor Locks, Ct.  
Crocker-Wheeler Co., Amherst, N. Y.  
Exeter Machine Works, Exeter, N. H.  
Green Fuel Economizer Co., Matteawan, N. Y.  
Howard & Morse, 45 Fulton St., N. Y.  
Sterling Blower & Pipe Mfg. Co., Hartford, Ct.  
B. F. Sturtevant Co., Boston, Mass.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.  
S. Obermayer Co., Cincinnati, O.  
Power Specialty Co., 111 Broadway, New York.  
Frank Toomey, 127-131 N. 3d St., Philadelphia, Pa.  
Jacob Ullman, Buffalo, N. Y.  
Wickes Bros., Saginaw, Mich.  
C. C. Wormer Machinery Co., Detroit, Mich.

**Fans, Gas Cleaning—**

Buffalo Forge Co., Buffalo, N. Y.

**Fans, Steam—**

American Blower Co., Detroit, Mich.  
Bayley Mfg. Co., Milwaukee, Wis.  
Boston Blower Co., Hyde Park, Mass.  
B. F. Sturtevant Co., Hyde Park, Mass.

**Farm Bells—**

(See Bells, Farm.)

**Farriers' Knives—**

(See Knives, Farriers')

**Farriers' Tools—**

(See Tools, Farriers')

**Fastener Punches—**

(See Punches, Eyelet and Fastener.)

**Fasteners, Adjustable Band.**

Tank and Cistern—

Winship Mfg. Co., Racine, Wis.

**Fasteners and Hinges, Box—**

(See Hinges and Fasteners.)

**Fasteners, Basement Window—**

Caldwell Mfg. Co., Rochester, N. Y.

**Fasteners, Bedstead—**

Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.  
Reading Hardware Co., Reading, Pa.  
Susquehanna Casting Co., Wrightsville, Pa.

**Fasteners, Belt—**

Billings & Spencer Co., Hartford, Ct.  
Bristol Co., Waterbury, Ct.  
Crescent Belt Fastener Co., Inc., 143 E. 23d St., New York.  
Indestructible Metal Co., 50 Church St., New York.  
Main Belting Co., 1219 Carpenter St., Philadelphia, Pa.  
W. O. Talcott, Providence, R. I.  
Upson Nut Co., Cleveland, O.  
(See also Belt Lacing.)

**Fasteners, Blind—**

Hanson Bros., Plainville, Ct.  
H. B. Ives Co., New Haven, Ct.  
Charles Parker Co., Meriden, Ct.  
Stanley Works, New Britain, Ct.  
Susquehanna Casting Co., Wrightsville, Pa.

W. & J. Tiebout, 118 Chambers St., N. Y.  
Harry Zimmerman & Co., Fremont, O.

**Fasteners, Box and Tub—**

Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.  
Cary Mfg. Co., 19-21 Roosevelt St., N. Y.  
W. R. Smallwood Mfg. Co., Gowanda, N. Y.

**Fasteners, Casement—**

Caldwell Mfg. Co., Rochester, N. Y.  
H. B. Ives Co., New Haven, Ct.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Fasteners, Cellar Window—**

Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

(See also Seta, Cellar Window.)

**Fasteners, Chain Door—**

Lawson Mfg. Co., 40 Dearborn St., Chicago, Ill.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Fasteners, Chain Door—**

Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Fasteners, Chain Door—**

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Fasteners, Conductor Pipe—**

Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

**Fasteners, Corrugated Steel**

Strip—

W. R. Smallwood Mfg. Co., Gowanda, N. Y.

**Fasteners, Hoop—**

Tower Mfg. Co., Cincinnati, O.

**Fasteners, Ice Box, Lever—**

Reading Hardware Co., Reading, Pa.

**Fasteners, Joint, Corrugated Steel—**

Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.

W. R. Smallwood Mfg. Co., Gowanda, N. Y.

**Fasteners, Refrigerator—**

(See Catches, Refrigerator.)

**Fasteners, Sash—**

(See Locks, Sash.)

**Fasteners, Screen and Storm**

Sash—

Parker Wire Goods Co., Worcester, Mass.

Phenix Mfg. Co., Milwaukee, Wis.

Stanley Works, New Britain, Ct.

Wire Goods Co., Worcester, Mass.

Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

**Fasteners, Sheet Roofing—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

**Fasteners, Slat, Straw Carrier—**

Advance Mfg. Co., Racine, Wis.

**Fasteners, Tag—**

E. H. Titchener & Co., Binghamton, N. Y.

**Faucets, Bottling—**

Landers, Frary & Clark, New Britain, Ct.

**Faucets, Brass—**

Clark Novelty Co., Rochester, N. Y.

Humphreys Mfg. Co., Mansfield, O.

Landers, Frary & Clark, New Britain, Ct.

Walworth Mfg. Co., Boston, Mass.



**Faucets, Can-**

Landers, Frary & Clark, New Britain, Ct.  
Taylor & Boggis Foundry Co., Cleveland, O.

**Faucets, Iron-**

Walworth Mfg. Co., Boston, Mass.

**Faucets, Measuring-**

Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

**Faucets, Self Measuring-**

Lane Bros. Co., Poughkeepsie, N. Y.

**Faucets, Suction-**

Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

**Faucets, Wooden-**

Boston & Lockport Block Co., East Boston, Mass.

John Sommer Faucet Co., Newark, N. J.

**Fault Finder, Electric-**

Electric Controller & Mfg. Co., Cleveland, O.

**Feed and Ensilage Cutters-**

(See Cutters, Feed.)

**Feed Boxes-**

(See Mangers, Feed.)

**Feed Mangers-**

(See Mangers, Feed.)

**Feed Mills, Pumps, Boiler-**

(See Mills, Pumps, Boiler Feed.)

**Feed Water Heaters, Purifiers, Regulators-**

(See Heaters, Purifiers, Regulators.)

**Feed Wire, Bare and Insulated-**

(See Wires, Electrical.)

**Feeders, Automatic Furnace, for Shavings-**

Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

**Feeders, Boiler-**

(See Boiler Feeders.)

**Feeds, Sight, for Oiling Devices-**

Lunkenheimer Co., Cincinnati, O.

**Feeds, Steam, Saw Mill-**

Pawling & Harnischfeger, Milwaukee, Wis.

**Soule Steam Feed Works, Meridian, Miss.**

(See Webs, Turning, Fellow, &c.)

**Felloe and Turning Webs-**

(See Webs, Turning, Fellow, &c.)

**Felloe Plates-**

(See Plates, Fellow.)

**Felting, Hair-**

Baeder, Adamson & Co., 210 Chestnut St., Philadelphia, Pa.

**Felts, Asphalt Saturated-**

National Roofing Co., Tonawanda, N. Y.

**Fence and Wire Stretchers-**

(See Stretchers, Fence and Wire.)

**Fence Machines, Wire-**

Cyclone Fence Co., Waukegan, Ill.

**Fence Posts-**

(See Posts.)

**Fence Wire-**

(See Wire, Iron and Steel, Market, Fence, Stone, &c.)

**Fencing, Gates, &c.-**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Anchor Post Iron Works, 27 Cortlandt St., New York.

Belmont Iron Works, Inc., Philadelphia.

Buffalo Wire Works Co., Inc., Buffalo, N. Y.

Clinton Wire Cloth Co., Clinton, Mass.

Cyclone Fence Co., Waukegan, Ill.

Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

De Kalb Fence Co., De Kalb, Ill.

Griswold Co., Sterling, Ill.

Dufur & Co., Baltimore, Md.

Enterprise Foundry & Fence Co., Indianapolis, Ind.

Estey Wire Works Co., 59 Fulton St., New York.

Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Glen Mfg. Co., Ellwood City, Pa.

Grand Crossing Tack Co., Grand Crossing, Ill.

Howard & Morse, 45 Fulton St., N. Y.

Keystone Steel & Wire Co., Peoria, Ill.

Ludlow-Saylor Wire Co., St. Louis, Mo.

Mast, Foos & Co., Springfield, O.

Fred J. Meyers Mfg. Co., Hamilton, O.

New Jersey Foundry & Machine Co., 9-15 Murray St., New York.

Nimmo Fence & Wire Works Co., Norwood, O.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

Pittsburgh Steel Co., Pittsburgh, Pa.

Spencer Wire Co., Worcester, Mass.

Stewart Iron Works Co., Cincinnati, O.

Van Dorn Iron Works Co., Cleveland, O.

Ward Fence Co., Decatur, Ind.

Wright Wire Co., Worcester, Mass.

**Fencing, Poultry-**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Cyclone Fence Co., Waukegan, Ill.

Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Griswold Co., Sterling, Ill.

New Jersey Wire Cloth Co., Trenton, N. J.

Nimmo Fence & Wire Works Co., Norwood, O.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

Wright Wire Co., Worcester, Mass.

**Fencing, Wood, Slat-**  
Nimmo Fence & Wire Works Co., Norwood, O.

**Fender Nails-**  
(See Nails, Fender.)

**Fenders and Dashes-**  
(See Dashes and Fenders.)

**Fenders and Tips, Rubber-**  
(See Tips, Fenders, Rubber.)

**Fenders, Automobile-**  
(See Automobile Fenders.)

**Fenders, Fire Place-**  
Buffalo Wire Works Co., Buffalo, N. Y.

Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

Estey Wire Works Co., 59 Fulton St., New York.

Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Howard & Morse, 45 Fulton St., N. Y.

Fred J. Meyers Mfg. Co., Hamilton, O.

Standard Wire Co., New Castle, Pa.

Wright Wire Co., Worcester, Mass.

**Fenders, Furniture-**  
Elastic Tip Co., Boston, Mass.

**Ferro-Chrome-**  
Roessler & Hasselacher Chemical Co., 100 William St., New York.

Western Foundry Supply Co., 50 Church St., New York.

**MERCHANTS.**

Reed F. Blair & Co., Pittsburgh, Pa.  
Frank Samuel, Harrison Bldg., Philadelphia, Pa.

**Ferro-Manganese—**  
Carnegie Steel Co., Pittsburgh, Pa.  
Roessler & Hasslacher Chemical Co., 100 William St., New York.  
Western Foundry Supply Co., 50 Church St., New York.

**MERCHANTS.**

Reed F. Blair & Co., Pittsburgh, Pa.  
J. H. Hillman & Son, Pittsburgh, Pa.  
J. W. Paxson Co., Philadelphia, Pa.  
Plitt & Co., Real Estate Trust Bldg., Philadelphia, Pa.

Rogers, Brown & Co., Cincinnati, O.  
Frank Samuel, Harrison Bldg., Philadelphia, Pa.

**Ferro-Molybdenum—**  
Roessler & Hasslacher Chemical Co., 100 William St., New York.

**MERCHANTS.**

Reed F. Blair & Co., Pittsburgh, Pa.  
**Ferro-Nickel—**  
Roessler & Hasslacher Chemical Co., 100 William St., New York.

**Ferro-Silicon—**  
Carnegie Steel Co., Pittsburgh, Pa.  
Western Foundry Supply Co., 50 Church St., New York.

**MERCHANTS.**

Reed F. Blair & Co., Pittsburgh, Pa.  
J. H. Hillman & Son, Pittsburgh, Pa.  
J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.  
Rogers, Brown & Co., Cincinnati, O.  
Frank Samuel, Harrison Bldg., Philadelphia, Pa.

**Ferro-Silicon, Electrolytic—**  
Roessler & Hasslacher Chemical Co., 100 William St., New York.

**Ferro-Tungsten—**  
Roessler & Hasslacher Chemical Co., 100 William St., New York.

**MERCHANTS.**

Reed F. Blair & Co., Pittsburgh, Pa.  
**Ferro-Vanadium—**  
Roessler & Hasslacher Chemical Co., 100 William St., New York.

**Ferrules—**  
Boston Pressed Metal Co., Worcester, Mass.

Bridgeport Brass Co., 253 Broadway, New York.

M. F. Cahill, Boston, Mass.  
U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.

R. C. Jenkinson & Co., Newark, N. J.  
Otto Konigslof Mfg. Co., Cleveland, O.  
Homer F. Livermore, Boston, Mass.  
H. A. Matthews Mfg. Co., Seymour, Ct.  
National Tube Co., Pittsburgh, Pa.  
John L. Parker Co., Worcester, Mass.  
Arthur T. Rutter & Co., 256 Broadway, New York.

Scovill Mfg. Co., Waterbury, Ct.  
Sparks-Withington Co., Ltd., Jackson, Mich.

Waterbury Brass Co., Waterbury, Ct.  
Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

Worcester Pressed Steel Co., Worcester, Mass.

**Ferrules, Boiler Flue—**  
U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.

**Ferrules, Condenser Tube—**  
U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.

**Fertilizer Distributors—**  
Bateman Mfg. Co., Greentown, N. J.  
Keystone Farm Machine Co., York, Pa.

**Fertilizer Machinery—**  
Poole Engineering & Machine Co., Baltimore, Md.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Field Glasses—**  
(See Glasses, Opera and Field.)

**Field Hoes—**  
(See Hoes, Garden, Field, Mortar.)

**Field Rollers—**  
(See Rollers, Land and Field.)

**Fifth Wheels—**  
(See Wheels, Fifth.)

**Figured Brass—**  
(See Brass.)

**Figures and Letters—**  
(See Letters and Figures, &c.)

**Figures, Ladies' Wire—**  
Dufur & Co., Baltimore, Md.

**File, Chisel and Awl Handles—**  
(See Handles, Chisel, File, Awl, &c.)

**File Cleaners—**  
(See Cleaners, File.)

**File Holders—**  
(See Handles, Detachable Tool.)

**File Machinery—**  
Hess Machine Works, 25th & Callowhill Sts., Philadelphia, Pa.  
Scranton & Co., New Haven, Ct.

**File Sharpeners—**  
American File Sharpener Co., 296 Broadway, New York.

**Files, Saw—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.  
Liveright Bros., Philadelphia, Pa.  
National Saw Co., Newark, N. J.  
New Britain Machine Co., New Britain, Ct.  
Oliver Machinery Co., Grand Rapids, Mich.

**Files and Rasps—**  
American File Sharpener Co., 296 Broadway, New York.

G. & H. Barnett Co., Philadelphia, Pa.  
Carver File Co., Philadelphia, Pa.  
Henry Disston & Sons, Philadelphia, Pa.  
Heller Bros. Co., Newark, N. J.

Liveright Bros., 20th St. & Allegheny Ave., Philadelphia, Pa.  
McCaffrey File Co., 5th & Berk Sts., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 83 Liberty St., New York.

National File & Tool Co., The Bourse, Philadelphia, Pa.

Nicholson File Co., Providence, R. I.  
Rex File & Saw Co., Newcomerstown, O.  
Simonds Mfg. Co., Fitchburg, Mass.  
Stokes Bros. Mfg. Co., Freehold, N. J.  
Western Tool & Mfg. Co., Springfield, O.  
Whitman & Barnes Mfg. Co., Chicago,

**Files, Babbit Metal—**

National File & Tool Co., The Bourse, Philadelphia, Pa.

Rex File & Saw Co., Newcomerstown, O.

**Files, Bill, Letter, &c.—**

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Columbia Grey Iron Co., Columbia, Pa.

Fred J. Meyers Mfg. Co., Hamilton, O.

Standard Wire Co., New Castle, Pa.

**Files, Brass—**

National File & Tool Co., The Bourse, Philadelphia, Pa.

Rex File & Saw Co., Newcomerstown, O.

**Files, Dentists'—**

Carver File Co., Philadelphia, Pa.

Liveright Bros., Philadelphia, Pa.

**Files, Document, Steel—**

W. J. Clark Co., Salem, O.

Van Dorn Iron Works Co., Cleveland, O.

**Files, Horse Tooth—**

Arcade Mfg. Co., Freeport, Ill.

National File & Tool Co., The Bourse, Philadelphia, Pa.

**Files, Jewelers'—**

G. & H. Barnett Co., Philadelphia, Pa.

Carver File Co., Philadelphia, Pa.

Henry Disston & Sons, Philadelphia, Pa.

Heller Bros. Co., Newark, N. J.

Liveright Bros., Philadelphia, Pa.

McCaffrey File Co., 5th & Berk Sts., Philadelphia, Pa.

Nicholson File Co., Providence, R. I.

**Files, Letter, Vertical, Steel—**

W. J. Clark Co., Salem, O.

**Files, Manicure—**

Carver File Co., Philadelphia, Pa.

Clauss Shear Co., Fremont, O.

Henry Disston & Sons, Philadelphia, Pa.

Liveright Bros., 20th St. & Allegheny Ave., Philadelphia, Pa.

McCaffrey File Co., 5th & Berk Sts., Philadelphia, Pa.

Nicholson File Co., Providence, R. I.

**Files, Milling—**

National File & Tool Co., The Bourse, Philadelphia, Pa.

**Files, Paper—**

Arcade Mfg. Co., Freeport, Ill.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Parker Wire Goods Co., Worcester, Mass.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Wire Goods Co., Worcester, Mass.

Wrightsville Hardware Co., Wrightsville, Pa.

**Files, Recutting—**

American File Sharpener Co., 236 Broadway, New York.

**Filing Attachment to Power Hack Saw—**

Robertson Drill & Tool Co., Buffalo, N. Y.

**Filing Guides and Clamps, Saw—**

(See Filers, Saw.)

**Filing Machines, Automatic Saw—**

Covel Mfg. Co., Fisher Bldg., Chicago, Ill.

**Filing Machines, Band Saw—**

(See Setting and Filing Machines, Band Saw.)

**Filing Machines, Bench—**

Robinson Tool Works, Waterbury, Ct.

**Filing Machines, Die—**

Grant Mfg. & Machine Co., Bridgeport, Ct.

**Fillers, Bag—**

John Chatillon & Sons, 85-93 Cliff St., New York.

Steel Basket Co., Cedar Rapids, Ia.

**Fillers for Iron and Steel Castings—**

Smooth-On Mfg. Co., Jersey City, N. J.

**Fillers, Fruit Jar—**

Lasher Mfg. Co., Davenport, Ia.

**Fillers, Iron—**

S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.

Western Foundry Supply Co., 50 Church St., New York.

**Fillers, Lamp—**

Dover Stamping & Mfg. Co., Cambridge, Mass.

Johnson Mfg. Co., Urbana, O.

**Fillers, Oiler—**

Gem Mfg. Co., Pittsburgh, Pa.

Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Fillers, Wire Rope—**

(See Coating and Fillers, Wire Rope.)

**Fillet Tools—**

(See Tools, Fillet.)

**Fillets, Leather—**

A. G. Butler, 284-286 Pearl St., New York.

Cleveland Galvanizing Works Co., Cleveland, O.

S. Obermayer Co., Cincinnati, O.

Oliver Machinery Co., Grand Rapids, Mich.

**Fillets, Metal—**

J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.

**Fillets, Wood—**

A. G. Butler, 284-286 Pearl St., New York.

Cleveland Galvanizing Works Co., Cleveland, O.

Oliver Machinery Co., Grand Rapids, Mich.

**Filter Paper—**

Eimer & Amend, 205 Third Ave., New York.

**Filter Presses—**

(See Presses, Filter.)

**Filters, Oil and Grease—**

Burt Mfg. Co., Akron, O.

W. J. Clark Co., Salem, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

**Filters, Water—**

Cleveland Stamping & Tool Co., Cleveland, O.

Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.

Landers, Frary & Clark, New Britain, Ct.

Manhattan Perforated Metal Co., 237 Centre St., New York.

Wm. B. Scaife & Sons, Pittsburgh, Pa.

**Finger Bars, Cold Rolled—**

Jones & Laughlin Steel Co., Pittsburgh.

**Fingers, Grain Cradle—**

American Fork & Hoe Co., Cleveland, O.

**Finials and Vanes, Metal—**  
Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.

**David Lupton's Sons Co.,** Westmoreland  
and Jarney Sts., Philadelphia, Pa.  
**Merchant & Evans Co.,** 517 Arch St.,  
Philadelphia, Pa.

**Finials, Iron—**  
(See Iron, Brass and Bronze, Ornamental.)

**Finishing Nails—**  
(See Tacks, Brads, Nails, &c.)

**Firearms—**  
(See Guns, Pistols, Revolvers, &c.)

**Fire Bells, Brick—**  
(See Bells, Brick Fire.)

**Fire Boat Machinery—**  
Charles F. Elmes Engineering Works, 253  
Fulton St., Chicago, Ill.

**Fire Buckets, Clay, &c.—**  
(See Buckets, Clay, &c.)

**Fire Dogs—**  
(See Andirons.)

**Fire Door and Shutter**

**Hardware—**  
Lane Bros. Co., Poughkeepsie, N. Y.  
Richards Mfg. Co., Aurora, Ill.

**Fire Door Arches and Piers**  
**for Boilers—**  
Cyrus Borgner Co., 23d St., above Race,  
Philadelphia, Pa.

**Fire Doors—**  
(See Doors and Shutters, Iron and Steel.)

**Fire Escapes, Extinguish-**  
**ers—**  
(See Escapes, Extinguishers.)

**Fire Place Fenders—**  
(See Fenders, Fire Place.)

**Fire Pots, Tinnern—**  
(See Furnaces, Plumbers' and Tinnern.)

**Fire Proof Building Mate-**  
**rial—**  
(See Building Material, Fire Proof.)

**Fire Proof Roofing—**  
(See Roofing, Fire Proof.)

**Fire Proof Vaults—**  
(See Vaults, Fire and Burglar Proof.)

**Fire Proof Window**  
**Frames—**  
(See Window Frames and Sash, Fire  
Proof.)

**Fire Sets—**  
(See Shovels, Tongs, Pokers, Fire Sets, &c.)

**Fire Shutter Hinges—**  
(See Hinges, Fire Door and Shutter.)

**Firemen's Trumpets—**  
(See Trumpets, Firemen's, Silver Plated.)

**Fish Plates, Scalors, String-**  
**ers, Traps—**  
(See Plates, Scalors, Stringers, Traps.)

**Fishing Reels—**  
(See Reels, Fishing.)

**Fishing Tackle—**  
Clark, Horrocks Co., Utica, N. Y.

**Dame, Stoddard & Co.,** Boston, Mass.

**Andrew B. Hendryx Co.,** New Haven, Ct.

**Horton Mfg. Co.,** Bristol, Ct.

**Fitters, Pipe—**  
John H. McGowan Co., Cincinnati, O.

**Pittsburgh Valve, Foundry & Construc-**  
**tion Co.,** Pittsburgh, Pa.

**Fittings, Ammonia—**  
American Steam Gauge & Valve Mfg.  
Co., Boston, Mass.

**Stanley G. Flagg & Co.,** Philadelphia, Pa.

**Lunkenheimer Co.,** Cincinnati, O.  
**Vilter Mfg. Co.,** Milwaukee, Wis.

**J. H. Williams & Co.,** Brooklyn, N. Y.

**Fittings, Automobile—**  
Worcester Pressed Steel Co., Worcester,  
Mass.

**Fittings, Bicycle—**  
Crosby Co., Buffalo, N. Y.

**Worcester Pressed Steel Co.,** Worcester,  
Mass.

**Fittings, Boiler—**  
American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

**American Steam Gauge & Valve Mfg.**  
**Co.,** Boston, Mass.

**American Welding Co.,** Carbondale, Pa.

**National Tube Co.,** Pittsburgh, Pa.

**Fittings, Carriage—**  
Worcester Pressed Steel Co., Worcester,  
Mass.

**Fittings, Derrick—**  
W. W. Patterson Co., Pittsburgh, Pa.

**Fittings, Furnace—**  
(See Pipe and Fittings, Warm Air  
Furnace.)

**Fittings, Hydraulic—**  
Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

**American Spiral Pipe Works, 48th Ave.**  
**and 14th St.,** Chicago, Ill.

**Chas. F. Elmes Engineering Works, 253-**  
**259 Fulton St.,** Chicago, Ill.

**A. W. Findlay Co., Inc.,** 23d and Market  
Sts., Philadelphia, Pa.

**Mesta Machine Co.,** Pittsburgh, Pa.

**National Tube Co.,** Pittsburgh, Pa.

**Pittsburgh Gage & Supply Co.,** Pitts-  
burgh, Pa.

**Pittsburgh Valve, Foundry & Construc-**  
**tion Co.,** Pittsburgh, Pa.

**Fittings, Malleable Iron—**  
Stanley G. Flagg & Co., 424 N. 19th St.,  
Philadelphia, Pa.

**Fittings, Pipe—**  
Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

**American Cast Iron Pipe Co.,** Birming-  
ham, Ala.

**American Spiral Pipe Works, 48th Ave.**  
**and 14th St.,** Chicago, Ill.

**Central Foundry Co.,** 157 Wall St., N. Y.

**Chambersburg Engineering Co.,** Chambers-  
burg, Pa.

**Charles F. Elmes Engineering Works, 253**  
**Fulton St.,** Chicago, Ill.

**A. W. Findlay Co., Inc.,** 23d and Market  
Sts., Philadelphia, Pa.

**Humphreys Mfg. Co.,** Mansfield, O.

**Jarecki Mfg. Co.,** Erie, Pa.

**Jefferson Union Co.,** Lexington, Mass.

**Lebanon Steel Casting Co.,** Lebanon, Pa.

**Lunkenheimer Co.,** Cincinnati, O.

**Lynchburg Foundry Co.,** Lynchburg, Va.

**Charles Muller & Son Co.,** Utica, N. Y.

**Morse Iron Works, Erie, Pa.**

**National Tube Co.,** Pittsburgh, Pa.

**Ohio Brass Co.,** Mansfield, O.

**Pittsburgh Gage & Supply Co.,** Pitts-  
burgh, Pa.

**Pittsburgh Valve, Foundry & Construc-**  
**tion Co.,** Pittsburgh, Pa.

**Wm. Powell Co.,** Cincinnati, O.

**United States Cast Iron Pipe & Foundry**  
**Co.,** 71 Broadway, New York.

Walworth Mfg. Co., Boston, Mass.  
Watson-Stillman Co., 50 Church St.,  
New York.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Fittings, Pipe, Flanged—**  
Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

A. W. Findlay Co., Inc., 23d and Market  
Sts., Philadelphia, Pa.

Jefferson Union Co., Lexington, Mass.

Lynchburg Foundry Co., Lynchburg, Va.

Charles Millar & Son Co., Utica, N. Y.

Morse Iron Works, Erie, Pa.

National Tube Co., Pittsburgh, Pa.

Philadelphia Roll & Machine Co., 23d &  
Washington Ave., Philadelphia, Pa.

Pittsburgh Gage & Supply Co., Pitts-  
burgh, Pa.

Pittsburgh Valve, Foundry & Construc-  
tion Co., Pittsburgh, Pa.

Walworth Mfg. Co., Boston, Mass.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Fittings, Railing—**  
National Tube Co., Pittsburgh, Pa.

**Fittings, Sanitary Vent—**  
Central Foundry Co., 137 Wall St., N. Y.

**Fittings, Screwed, Pipe—**  
Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

**Fittings, Soil Pipe—**  
Charles Millar & Son Co., Utica, N. Y.

**Fittings, Stable—**  
(See Stable Fixtures.)

**Fittings, Steam—**  
Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

Charles F. Elmes Engineering Works, 253  
Fulton St., Chicago, Ill.

A. W. Findlay Co., Inc., 23d and Market  
Sts., Philadelphia, Pa.

U. T. Hungerford Brass & Copper Co.,  
497-505 Pearl St., New York.

Indestructible Metal Co., 50 Church  
St., New York.

Jarecki Mfg. Co., Erie, Pa.

Jefferson Union Co., Lexington, Mass.

Lebanon Steel Casting Co., Lebanon, Pa.

Lunkenheimer Co., Cincinnati, O.

Charles Millar & Son Co., Utica, N. Y.

Morse Iron Works, Erie, Pa.

National Tube Co., Pittsburgh, Pa.

Ohio Brass Co., Mansfield, O.

Pittsburgh Valve, Foundry & Construc-  
tion Co., Pittsburgh, Pa.

Wm. Powell Co., Cincinnati, O.

Walworth Mfg. Co., Boston, Mass.

**Fittings, Tramway—**  
Broderick & Bascom Rope Co., St. Louis.

A. Leschen & Sons Rope Co., St. Louis.

**Fittings, Wire Rope—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Hazard Mfg. Co., Wilkes-Barre, Pa.

A. Leschen & Sons Rope Co., St. Louis,  
Mo.

Williamsport Wire Rope Co., Williams-  
port, Pa.

**Fixtures and Furniture,  
Bank—**  
(See Bank Fixtures and Furniture.)

**Fixtures, Bathroom—**  
(See Bathroom Toilet Specialties.)

**Fixtures, Curtain Rod—**  
(See Curtain Rod Fixtures.)

**Fixtures, Fire Door—**  
(See Fire Door and Shutter Hardware.)

**Fixtures, Gasoline, Gas—**  
American Gas Machine Co., Albert Lea,  
Minn.

**Fixtures, Grindstone, Sta-  
ble, Store—**  
(See Grindstone, Stable, Store.)

**Fixtures, Hay Rack—**  
(See Clamps, Hay Rack.)

**Fixtures, Lighting—**  
(See Chandeliers and Wall Fixtures.)

**Fixtures, Lightning Rod—**  
(See Lightning Rod Fixtures.)

**Fixtures, Stable—**  
(See Stable Fixtures.)

**Flag Pole Sockets—**  
(See Sockets, Flag Pole.)

**Flags, Alcohol—**  
New York Stamping Co., Brooklyn, N. Y.

**Flagstaff Holders—**  
(See Holders, Flag Pole.)

**Flagstaffs, Iron—**  
Allegheny Forging Co., Pittsburgh, Pa.

Nimmo Fence & Wire Works Co., Nor-  
wood, O.

**Flange Couplings—**  
(See Couplings, Flange.)

**Flange Facing Machines—**  
Detrick & Harvey Machine Co., Balti-  
more, Md.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

**Flanges, Ammonia—**  
Indianapolis Drop Forging Co., Indian-  
apolis, Ind.

**Flanges, Boiler—**  
American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

**Flanges, Cast Iron—**  
American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

**Flanges, Forged Steel—**  
American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

Pittsburgh Valve, Foundry & Construc-  
tion Co., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and  
Wayman Sts., Chicago, Ill.

Sundberg, Kropp & Co., 1121-1131 W. 21st  
St., Chicago, Ill.

**Flanges, Lavatory Floor—**  
Ireland & Matthews Mfg. Co., Detroit,  
Mich.

**Flanges, Man and Flue  
Hole—**  
R. Munroe & Sons Mfg. Corporation,  
Pittsburgh, Pa.

**Flanges, Pipe—**  
American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

Lunkenheimer Co., Cincinnati, O.

**Flanges, Roof—**  
(See Saddles, Pipe.)

**Flanges, Soft Weldless  
Steel—**  
American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

**Flanges, Steel Pipe—**  
Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.  
Thomas Prosser & Son, 26 Platt St., N. Y.

**Flanges, Tank—**  
American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

**Flanges, Vehicle Wheel—**  
Sparks-Withington Co., Ltd., Jackson,  
Mich.

**Flanges, Weldless, Steel—**  
American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

Chrome Steel Works, Chrome, N. J.  
E. Keeler Co., Williamsport, Pa.  
Pressed Steel Tank Co., Milwaukee, Wis.

**Flanging Clamps—**  
(See Clamps, Flanging.)

**Flanging Machines—**  
Alliance Machine Co., Alliance, O.  
E. W. Bliss Co., Brooklyn, N. Y.  
Niagara Machine & Tool Works, Buffalo,  
N. Y.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

**Flash Light Parts—**  
(See Automobile Parts.)

**Flashing, Side and End**  
**Wall, Metal—**

Hazelton Sheet Steel Co., Hazelton, Pa.  
Thomas Steel Co., Niles, O.

**Flasks, Foundry Snap—**  
Arcade Mfg. Co., Freeport, Ill.

A. Jörn, Jr., Waukegan, Ill.  
S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., 1021 N. Delaware Ave.,  
Philadelphia, Pa.

Richmond Foundry & Mfg. Co., Inc.,  
Richmond, Va.

Louis Sacks Foundry Co., Newark, N. J.

**Flasks, Jewelers'—**  
Louis Sacks Foundry Co., Newark, N. J.

**Flasks, Silver Plated—**  
International Silver Co., Meriden, Ct.

**Flasks, Steel—**  
Meehan Boiler & Construction Co., Low-  
ellville, O.

S. Obermayer Co., Cincinnati, O.

**Flat Cable for Mine Hoist-  
ing—**

Massachusetts Belting Co., Boston, Mass.

**Flat Link Chains—**  
(See Chains, Flat Link.)

**Flat Transmission—**  
Massachusetts Belting Co., Boston, Mass.

**Flexible Hangers—**  
(See Hangers, Hinge.)

**Flexible Shafts—**  
(See Shafts, Flexible.)

**Flies, Artificial—**  
Clark-Horrocks Co., Utica, N. Y.

**Floats, Copper Ball—**  
Otto Königslow Mfg. Co., Cleveland, O.

Naugatuck Mfg. Co., Naugatuck, Ct.  
Worcester Pressed Steel Co., Worcester,  
Mass.

**Floats, Counter—**  
Louis Sacks, Newark, N. J.

**Floats, Fish Line—**  
Clark-Horrocks Co., Utica, N. Y.  
Horton Mfg. Co., Bristol, Ct.

**Floats, Tank—**  
Ireland & Matthews Mfg. Co., Detroit,  
Mich.

W. R. Ostrander & Co., 22 Dey St., N. Y.

**Floor and Base Knobs—**  
(See Knobs, Base and Floor.)

**Floor Stands—**  
(See Stands, Floor.)

**Floor Scraping Machines—**  
(See Scrapers, Floor.)

**Flooring, Bridge—**  
American Bridge Co. of New York, 30  
Church St., New York.

Youngstown Iron & Steel Roofing Co.,  
Youngstown, O.

**Flooring, Fire Proof—**  
Youngstown Iron & Steel Roofing Co.,  
Youngstown, O.

**Floors, Perforated Steel—**  
Harrington & King Perforating Co., Chi-  
cago, Ill.

Manhattan Perforated Metal Co., 237  
Centre St., New York.

**Floors, Wire Cloth—**  
Buffalo Wire Works Co., Inc., Buffalo,  
N. Y.

Clinton Wire Cloth Co., Clinton, Mass.

Dufur & Co., Baltimore, Md.

Howard & Morse, 45 Fulton St., N. Y.

Ludlow-Saylor Wire Co., St. Louis, Mo.

Michigan Wire Cloth Co., Detroit, Mich.

W. S. Tyler Co., Cleveland, O.

Wright Wire Co., Worcester, Mass.

**Flour Mill Machinery—**  
Poole Engineering & Machine Co., Balti-  
more, Md.

**Flour Sieves, Sifters, Test-  
ers—**  
(See Sieves, Sifters, Testers.)

**Flower Bed Borders—**  
(See Guards, Lawn and Flower Bed.)

**Flower Guards, Pickers—**  
(See Guards, Pickers.)

**Flower Pot Brackets—**  
Stands—  
(See Brackets, Stands.)

**Flue Cleaners, Ventilators—**  
(See Cleaners, Ventilators.)

**Flue Expanders—**  
(See Expanders, Tube.)

**Flumes, Steel—**  
Franklin Boiler Works Co., Troy, N. Y.

E. Keeler Co., Williamsport, Pa.

Petroleum Iron Works Co., Sharon, Pa.

**Fluor Spar—**  
J. Tatnall Lea & Co., 19 So. 12th St.,  
Philadelphia, Pa.

S. Obermayer Co., Cincinnati, O.

Rogers, Brown & Co., Cincinnati, O.

Frank Samuel, 15th and Market Sts.,  
Philadelphia, Pa.

**Flush Rings—**  
(See Rings, Flush.)

**Fluted Drills—**  
(See Drills, Fluted.)

**Fluters—**  
North Bros. Mfg. Co., Philadelphia, Pa.

**Fly Killers, Trans—**  
(See Killers, Traps.)

**Fly Oil—**  
(See Oil, Fly.)

**Fly Wheels—**  
H. W. Caldwell & Son Co., Western  
Ave. & 17th St., Chicago, Ill.

Dodge Mfg. Co., Mishawaka, Ind.  
 Falls Rivet & Machine Co., Cuyahoga Falls, O.  
 Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.  
 Mackintosh, Hemphill & Co., Pittsburgh, Pa.  
 Pacific Iron Works, Bridgeport, Ct.  
 Pennsylvania Engineering Works, New Castle, Pa.  
 Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia.  
 Poole Engineering & Machine Co., Baltimore, Md.  
 Wickes Bros., Saginaw, Mich.

**Fodder Shredders, Dry—**  
 (See Shredders, Dry Fodder.)

**Foil, Platinum—**

Baker & Co., Inc., Newark, N. J.  
 J. Bishop & Co., Malvern, Pa.

**Folding Bed Hinges—**  
 (See Hinges, Folding Bed.)

**Folding Gates—**  
 (See Gates, Extension.)

**Folding Machinery, Paper—**  
 Chambers Bros. Co., 52d St. below Lancaster Ave., Philadelphia, Pa.  
 Chas. Leffler & Co., Brooklyn, N. Y.

**Folding Machines, Envelope—**

R. E. Kidder, Worcester, Mass.

**Foot Powers—**  
 (See Powers, Foot.)

**Forcing Machines, Hand or Power—**

Niles-Bement-Pond Co., 111 Broadway, New York.

**Forged Bolts, Unions—**  
 (See Bolts, Unions.)

**Forged Steel, Axles, Car—**  
 (See Axles, Forged Steel.)

**Forges—**

Acme Machinery Co., Cleveland, O.  
 American Gas Furnace Co., 23 John St., New York.  
 Billings & Spencer Co., Hartford, Ct.  
 C. C. Bradley & Son, Syracuse, N. Y.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Champion Blower & Forge Co., Lancaster, Pa.  
 Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
 Ingersoll-Rand Co., 11 Broadway, New York.  
 Miner & Peck Mfg. Co., New Haven, Ct.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 Silver Mfg. Co., Salem, O.  
 W. F. Sturtevant Co., Boston, Mass.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Wickes Bros., Saginaw, Mich.

**MERCHANTS**

Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.  
 Hill, Clarke & Co., Boston, Mass.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 F. P. Schlelein Machinery Co., Pittsburgh, Pa.  
 Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.  
 A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
 C. C. Wormer Machinery Co., Detroit.

**Forges, Compressed Air—**  
 Buffalo Forge Co., Buffalo, N. Y.

**Forges, Gas—**  
 American Gas Furnace Co., 23 John St., New York.  
 Ingersoll-Rand Co., 11 Broadway, New York.

Monarch Engineering & Mfg. Co., Baltimore, Md.

U. S. Gas Furnace Co., Providence, R. I.

**Forges, Portable—**  
 (See Forges.)

**Forging and Bending Machines—**

E. W. Bliss Co., Brooklyn, N. Y.  
 Niles-Bement-Pond Co., 111 Broadway, New York.

Watson-Stilman Co., 59 Church St., N. Y.

**Forging Machines—**

Acme Machinery Co., Cleveland, O.  
 Adriance Machine Works, Brooklyn, N. Y.  
 Ajax Mfg. Co., Cleveland, O.  
 Beaudry & Co., Boston, Mass.  
 Billings & Spencer Co., Hartford, Ct.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 National Machinery Co., Tiffin, O.  
 Scranton & Co., New Haven, Ct.  
 Williams, White & Co., Moline, Ill.  
 Zeh & Hahnemann Co., Newark, N. J.

**MERCHANTS**

Marshall & Huchart Machinery Co., 62 S. Canal St., Chicago, Ill.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

**Forging Machines, Bolt—**

Acme Machinery Co., Cleveland, O.  
 Ajax Mfg. Co., Cleveland, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

National Machinery Co., Tiffin, O.  
 Williams, White & Co., Inc., Moline, Ill.

**Forging Machines, Hand or Power—**

Beaudry & Co., Boston, Mass.  
 Scranton & Co., New Haven, Ct.  
 Williams, White & Co., Moline, Ill.

**Forging Machines, Nut—**

Acme Machinery Co., Cleveland, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

National Machinery Co., Tiffin, O.

**Forging Machines, Sheet Metal—**

Adriance Machine Works, Brooklyn, N. Y.  
 E. W. Bliss Co., Brooklyn, N. Y.

Consolidated Press & Tool Co., Hastings, Mich.

A. Garrison Foundry Co., Pittsburgh, Pa.  
 Zeh & Hahnemann Co., Newark, N. J.

**Forgings, Automobile—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
 Billings & Spencer Co., Hartford, Ct.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Cambria Forge Co., Johnstown, Pa.  
 Canton Drop Forging & Mfg. Co., Canton, O.

Chicago Drop Forge & Foundry Co., Kensington, Ill.

E. D. Clapp Mfg. Co., Auburn, N. Y.  
 Consolidated Mfg. Co., Toledo, O.

General Drop Forge Co., Buffalo, N. Y.

Indianapolis Drop Forging Co., Indianapolis, Ind.

Keystone Drop Forge Works, Chester, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
New Castle Forge & Bolt Co., New Castle, Pa.

Page-Storms Drop Forge Co., Chicopee, Mass.

Park Drop Forge Co., Cleveland, O.  
Thomas Prosser & Son, 26 Platt St., N.Y.  
Revere Drop Forge Co., Revere, Mass.  
Richmond Forgings Corporation, Richmond, Va.

Strieby & Foote Co., Newark, N. J.  
Tindel-Morris Co., Eddystone, Pa.  
Transue & Williams Co., Alliance, O.  
Wyman & Gordon, Worcester, Mass.

**Forgings, Bicycle—**

Belden Machine Co., New Haven, Ct.  
Billings & Spencer Co., Hartford, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Cambria Forge Co., Johnstown, Pa.  
Canton Drop Forging & Mfg. Co., Canton, O.

Chicago Drop Forge & Foundry Co., Kensington, Ill.

E. D. Clapp Mfg. Co., Auburn, N. Y.  
Consolidated Mfg. Co., Toledo, O.  
Richard Eccles Co., Auburn, N. Y.  
General Drop Forge Works, Chester, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
Page-Storms Drop Forge Co., Chicopee, Mass.

Park Drop Forge Co., Cleveland, O.  
Richmond Forgings Corporation, Richmond, Va.

M. Seward & Son Co., New Haven, Ct.  
Strieby & Foote Co., Newark, N. J.  
J. H. Williams & Co., Brooklyn, N. Y.  
Wyman & Gordon, Worcester, Mass.

**Forgings, Bronze—**

Billings & Spencer Co., Hartford, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Cambria Forge Co., Johnstown, Pa.  
Chicago Drop Forge & Foundry Co., Kensington, Ill.

E. D. Clapp Mfg. Co., Auburn, N. Y.  
General Drop Forge Co., Buffalo, N. Y.  
Keystone Drop Forge Works, Chester, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
Page-Storms Drop Forge Co., Chicopee, Mass.

Park Drop Forge Co., Cleveland, O.  
Phosphor Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia.  
Richmond Forgings Corporation, Richmond, Va.

J. H. Williams & Co., Brooklyn, N. Y.  
Wyman & Gordon, Worcester, Mass.

**Forgings, Car—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Bridge Co. of New York, 30 Church St., New York.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

Bethlehem Steel Co., So. Bethlehem, Pa.  
Block-Pollak Iron Co., Cincinnati, O.  
Cambria Forge Co., Johnstown, Pa.  
Canton Drop Forging & Mfg. Co., Canton, O.  
Carnegie Steel Co., Pittsburgh, Pa.

Chicago Drop Forge & Foundry Co., Kensington, Ill.

Cleveland City Forge & Iron Co., Cleveland, O.

General Drop Forge Co., Buffalo, N. Y.  
Wm. Harris & Son, Pittsburgh, Pa.  
Keystone Drop Forge Works, Chester, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
New Castle Forge & Bolt Co., New Castle, Pa.

Pennsylvania Forge Co., Philadelphia, Pa.

Richmond Forgings Corporation, Richmond, Va.

Transue & Williams Co., Alliance, O.

**Forgings, Carriage—**

Belden Machine Co., New Haven, Ct.  
Billings & Spencer Co., Hartford, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
C. C. Bradley & Son, Inc., Syracuse, N. Y.

Cambria Forge Co., Johnstown, Pa.

Chicago Drop Forge & Foundry Co., Kensington, Ill.

E. D. Clapp Mfg. Co., Auburn, N. Y.

Richard Eccles Co., Auburn, N. Y.

General Drop Forge Co., Buffalo, N. Y.

Kilborn & Bishop Co., New Haven, Ct.

Millersburgh Fifth Wheel Co., Millersburgh, Pa.

Page-Storms Drop Forge Co., Chicopee, Mass.

Scranton Forging Co., Scranton, Pa.

M. Seward & Son Co., New Haven, Ct.

Strieby & Foote Co., Newark, N. J.

Wyman & Gordon, Worcester, Mass.

**Forgings, Chrome Nickel Steel—**

Allegheny Forging Co., Pittsburgh, Pa.

Canton Drop Forging & Mfg. Co., Canton, O.

McDougall & Potter Co., 606-614 W. 55th St., New York.

Thomas Prosser & Son, 26 Platt St., N.Y.

Tindel-Morris Co., Eddystone, Pa.

**Forgings, Chrome Steel—**

Allegheny Forging Co., Pittsburgh, Pa.

Chrome Steel Works, Chrome, N. J.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Forgings, Coal Breaker—**

Cambria Forge Co., Johnstown, Pa.

Richmond Forgings Corporation, Richmond, Va.

**Forgings, Copper—**

Billings & Spencer Co., Hartford, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Cambria Forge Co., Johnstown, Pa.

Chicago Drop Forge & Foundry Co., Kensington, Ill.

General Drop Forge Co., Buffalo, N. Y.

Keystone Drop Forge Works, Chester, Pa.

Kilborn & Bishop Co., New Haven, Ct.

Homer F. Livermore, Boston, Mass.

Page-Storms Drop Forge Co., Chicopee, Mass.

Park Drop Forge Co., Cleveland, O.

Richmond Forgings Corporation, Richmond, Va.

Transue & Williams Co., Alliance, O.

J. H. Williams & Co., Brooklyn, N. Y.

Wyman & Gordon, Worcester, Mass.

**Forgings, Crank—**

Allegheny Forging Co., Pittsburgh, Pa.

E. W. Bliss Co., Brooklyn, N. Y.



Block-Pollak Iron Co., Cincinnati, O.  
 Cambria Forge Co., Johnstown, Pa.  
 General Drop Forge Co., Buffalo, N. Y.  
 Wm. Harris & Son, Pittsburgh, Pa.  
 Keystone Drop Forge Works, Chester, Pa.  
 Page-Storms Drop Forge Co., Chicopee, Mass.  
 Park Drop Forge Co., Cleveland, O.  
 Pennsylvania Forge Co., Philadelphia, Pa.

### **Forgings, Cream Separator Bowls—**

E. W. Bliss Co., Brooklyn, N. Y.

### **Forgings, Die—**

Hay-Budden Mfg. Co., Brooklyn, N. Y.  
 Tindel-Morris Co., Eddystone, Pa.

### **Forgings, Drop—**

Allegheny Forging Co., Pittsburgh, Pa.  
 American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.  
 Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.  
 Belden Machine Co., New Haven, Ct.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Billings & Spencer Co., Hartford, Ct.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Cambria Forge Co., Johnstown, Pa.  
 Canton Drop Forging & Mfg. Co., Canton, O.  
 Chicago Drop Forge & Foundry Co., Kensington, Ill.

E. D. Clapp Mfg. Co., Auburn, N. Y.  
 Consolidated Mfg. Co., Toledo, O.  
 Richard Eccles Co., Auburn, N. Y.  
 General Drop Forging Co., Buffalo, N. Y.  
 Helwig Mfg. Co., St. Paul, Minn.  
 Indianapolis Drop Forging Co., Indianapolis, Ind.

Janney, Steinmetz & Co., Philadelphia.  
 Keystone Drop Forge Works, Chester, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
 M. Lanz & Sons, Pittsburgh, Pa.  
 Thomas Laughlin Co., Portland, Me.  
 Homer F. Livermore, Boston, Mass.  
 New Castle Forge & Bolt Co., New Castle, Pa.

O. K. Tool Holder Co., Shelton, Ct.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Page-Storms Drop Forge Co., Chicopee, Mass.

Park Drop Forge Co., Cleveland, O.  
 Phosphor Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia.  
 Thomas Prosser & Son, 26 Platt St., N.Y.  
 Revere Drop Forge Co., Revere, Mass.  
 Rhode Island Tool Co., Providence, R. I.  
 Richmond Forgings Corporation, Richmond, Va.

Scranton Forging Co., Scranton, Pa.  
 M. Seward & Son Co., New Haven, Ct.  
 Strieby & Foote Co., Newark, N. J.  
 Sundberg, Kropp & Co., 1121-1131 W. 21st St., Chicago, Ill.

Transue & Williams Co., Alliance, O.  
 Western Malleable Steel Co., Detroit, Mich.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

J. H. Williams & Co., Brooklyn, N. Y.  
 Wyman & Gordon, Worcester, Mass.

### **Forgings, Gas Engine—**

Allegheny Forging Co., Pittsburgh, Pa.  
 Block-Pollak Iron Co., Cincinnati, O.  
 Cambria Forge Co., Johnstown, Pa.  
 Canton Drop Forging & Mfg. Co., Canton, O.

Keystone Drop Forge Works, Chester, Pa.  
 New Castle Forge & Bolt Co., New Castle, Pa.

Page-Storms Drop Forge Co., Chicopee, Mass.

Park Drop Forge Co., Cleveland, O.  
 Pennsylvania Forge Co., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.  
 Tindel-Morris Co., Eddystone, Pa.

### **Forgings, Gear Blank—**

Allegheny Forging Co., Pittsburgh, Pa.  
 Block-Pollak Iron Co., Cincinnati, O.  
 Cambria Forge Co., Johnstown, Pa.  
 Canton Drop Forging & Mfg. Co., Canton, O.

Chicago Drop Forge & Foundry Co., Kensington, Ill.

E. D. Clapp Mfg. Co., Auburn, N. Y.  
 General Drop Forge Co., Buffalo, N. Y.

Keystone Drop Forge Works, Chester, Pa.  
 Park Drop Forge Co., Cleveland, O.  
 Pennsylvania Forge Co., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.  
 Richmond Forgings Corporation, Richmond, Va.

### **Forgings, Gun—**

Allegheny Forging Co., Pittsburgh, Pa.  
 Belden Machine Co., New Haven, Ct.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Billings & Spencer Co., Hartford, Ct.  
 Cambria Forge Co., Johnstown, Pa.  
 Chicago Drop Forge & Foundry Co., Kensington, Ill.

E. D. Clapp Mfg. Co., Auburn, N. Y.  
 General Drop Forge Co., Buffalo, N. Y.  
 Wm. Harris & Son, Pittsburgh, Pa.  
 Keystone Drop Forge Works, Chester, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
 Park Drop Forge Co., Cleveland, O.  
 Thomas Prosser & Son, 26 Platt St., N.Y.  
 J. H. Williams & Co., Brooklyn, N. Y.  
 Wyman & Gordon, Worcester, Mass.

### **Forgings, Hammered—**

Allegheny Forging Co., Pittsburgh, Pa.  
 Block-Pollak Iron Co., Cincinnati, O.  
 Western Malleable Steel Co., Detroit, Mich.

### **Forgings, Handle—**

Allegheny Forging Co., Pittsburgh, Pa.  
 Belden Machine Co., New Haven, Ct.  
 Billings & Spencer Co., Hartford, Ct.  
 Chicago Drop Forge & Foundry Co., Kensington, Ill.

General Drop Forge Co., Buffalo, N. Y.  
 Keystone Drop Forge Works, Chester, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
 Page-Storms Drop Forge Co., Chicopee, Mass.

Whitman & Barnes Mfg. Co., Chicago, Ill.

J. H. Williams & Co., Brooklyn, N. Y.  
 Wyman & Gordon, Worcester, Mass.

### **Forgings, Hydraulic—**

E. W. Bliss Co., Brooklyn, N. Y.

### **Forgings, Iron, Special—**

Allegheny Forging Co., Pittsburgh, Pa.  
 American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.  
 Belden Machine Co., New Haven, Ct.  
 Billings & Spencer Co., Hartford, Ct.  
 Block-Pollak Iron Co., Cincinnati, O.  
 Cambria Forge Co., Johnstown, Pa.

Canton Drop Forging & Mfg. Co., Canton, O.  
 Chicago Drop Forge & Foundry Co., Kensington, Ill.  
 E. D. Clapp Mfg. Co., Auburn, N. Y.  
 Cleveland City Forge & Iron Co., Cleveland, O.  
 Cleveland Punch & Shear Works Co., Cleveland, O.  
 Richard Eccles Co., Auburn, N. Y.  
 Fort Pitt Forge Co., Pittsburgh, Pa.  
 General Drop Forge Co., Buffalo, N. Y.  
 Wm. Harris & Son, Pittsburgh, Pa.  
 Heppenstall Forge & Knife Co., Pittsburgh, Pa.  
 Janney, Steinmetz & Co., Drexel Bldg., Philadelphia, Pa.  
 Keystone Drop Forge Works, Chester, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
 McDougall & Potter Co., 606-612 W. 55th St., New York.  
 New Castle Forge & Bolt Co., New Castle, Pa.  
 O. K. Tool Holder Co., Shelton, Ct.  
 Page-Storms Drop Forge Co., Chicopee, Mass.  
 Park Drop Forge Co., Cleveland, O.  
 W. W. Patterson Co., Pittsburgh, Pa.  
 Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
 Pittsburgh Mfg. Co., Pittsburgh, Pa.  
 Richmond Forgings Corporation, Richmond, Va.  
 Wm. B. Scaife & Sons Co., Pittsburgh.  
 M. Seward & Son Co., New Haven, Ct.  
 Strieby & Foote Co., Newark, N. J.  
 Transue & Williams Co., Alliance, O.  
 J. H. Williams & Co., Brooklyn, N. Y.  
 Wyman & Gordon, Worcester, Mass.

**Forgings, Locomotive—**  
 Allegheny Forging Co., Pittsburgh, Pa.  
 Block-Pollak Iron Co., Cincinnati, O.  
 Wm. Harris & Son, Pittsburgh, Pa.  
 Keystone Drop Forge Works, Chester, Pa.  
 Pennsylvania Forge Co., Philadelphia, Pa.

**Forgings, Malleable—**  
 Chicago Drop Forge & Foundry Co., Kensington, Ill.

**Forgings, Manganese Bronze—**  
 Billings & Spencer Co., Hartford, Ct.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Chicago Drop Forge & Foundry Co., Kensington, Ill.  
 General Drop Forge Co., Buffalo, N. Y.  
 Keystone Drop Forge Works, Chester, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
 Park Drop Forge Co., Cleveland, O.  
 Phosphor Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia.  
 Wyman & Gordon, Worcester, Mass.

**Forgings, Marine, Machine, Railroad and Shaft—**  
 Allegheny Forging Co., Pittsburgh, Pa.  
 Heiden Machine Co., New Haven, Ct.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Billings & Spencer Co., Hartford, Ct.  
 Block-Pollak Iron Co., Cincinnati, O.  
 Braeburn Steel Co., Braeburn, Pa.  
 Cambria Forge Co., Johnstown, Pa.  
 Canton Drop Forging & Mfg. Co., Canton, O.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Chicago Drop Forge & Foundry Co., Kensington, Ill.

E. D. Clapp Mfg. Co., Auburn, N. Y.  
 Cleveland City Forge & Iron Co., Cleveland, O.  
 Cleveland Punch & Shear Works Co., Cleveland, O.  
 Fort Pitt Forge Co., Pittsburgh, Pa.  
 General Drop Forge Co., Buffalo, N. Y.  
 Wm. Harris & Son, Pittsburgh, Pa.  
 Hay-Budden Mfg. Co., Brooklyn, N. Y.  
 Heppenstall Forge & Knife Co., Pittsburgh, Pa.  
 Indianapolis Drop Forging Co., Indianapolis, Ind.  
 Janney, Steinmetz & Co., Philadelphia.  
 Keystone Drop Forge Works, Chester, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
 Thomas Laughlin Co., Portland, Me.  
 McDougall & Potter Co., 606-612 W. 55th St., New York.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Otis Steel Co., Ltd., Cleveland, O.  
 Page-Storms Drop Forge Co., Chicopee, Mass.  
 Park Drop Forge Co., Cleveland, O.  
 Pennsylvania Forge Co., Philadelphia, Pa.  
 Thomas Prosser & Son, 26 Platt St., N.Y.  
 Republic Iron & Steel Co., Pittsburgh, Pa.  
 Richmond Forgings Corporation, Richmond, Va.  
 Strieby & Foote Co., Newark, N. J.  
 Sundberg, Kropp & Co., 1121-1131 W. 21st St., Chicago, Ill.  
 Tindell-Morris Co., Eddystone, Pa.  
 Transue & Williams Co., Alliance, O.  
 Vulcan Iron Works, 28 No. Irving Ave., Chicago, Ill.  
 Wilcox, Crittenden & Co., Inc., Middletown, Ct.  
 J. H. Williams & Co., Brooklyn, N. Y.  
 Wyman & Gordon, Worcester, Mass.

**Forgings, Steel—**  
 Allegheny Forging Co., Pittsburgh, Pa.  
 American Bridge Co., of New York, 30 Church St., New York.  
 American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.  
 Belden Machine Co., New Haven, Ct.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Billings & Spencer Co., Hartford, Ct.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Block-Pollak Iron Co., Cincinnati, O.  
 Braeburn Steel Co., Braeburn, Pa.  
 Cambria Forge Co., Johnstown, Pa.  
 Canton Drop Forging & Mfg. Co., Canton, O.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Chicago Drop Forge & Foundry Co., Kensington, Ill.  
 Chrome Steel Works, Chrome, N. J.  
 E. D. Clapp Mfg. Co., Auburn, N. Y.  
 Cleveland City Forge & Iron Co., Cleveland, O.  
 Cleveland Punch & Shear Works Co., Cleveland, O.  
 Colonial Steel Co., Pittsburgh, Pa.  
 Consolidated Mfg. Co., Toledo, O.  
 Richard Eccles Co., Auburn, N. Y.  
 Farist Steel Co., Bridgeport, Ct.  
 Fort Pitt Forge Co., Pittsburgh, Pa.  
 General Drop Forge Co., Buffalo, N. Y.  
 Wm. Harris & Son, Pittsburgh, Pa.  
 Hay-Budden Mfg. Co., Brooklyn, N. Y.  
 Heppenstall Forge & Knife Co., Pittsburgh, Pa.

- Indianapolis Drop Forging Co., Indianapolis, Ind.  
 Janney, Steinmetz & Co., Philadelphia.  
 Keystone Drop Forge Works, Chester, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
 McDougall & Potter Co., 606-612 W. 55th St., New York.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Milton Mfg. Co., Milton, Pa.  
 New Castle Forge & Bolt Co., New Castle, Pa.  
 O. K. Tool Holder Co., Shelton, Ct.  
 Otis Steel Co., Ltd., Cleveland, O.  
 Page-Storms Drop Forge Co., Chicopee, Mass.  
 Park Drop Forge Co., Cleveland, O.  
 W. W. Patterson Co., Pittsburgh, Pa.  
 Pennsylvania Forge Co., Philadelphia, Pa.  
 Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
 Pittsburgh Mfg. Co., Pittsburgh, Pa.  
 Thomas Prosser & Son, 26 Platt St., N.Y.  
 Richmond Forgings Corporation, Richmond, Va.  
 Wm. B. Scaife & Sons Co., Pittsburgh.  
 M. Seward & Son Co., New Haven, Ct.  
 Strieby & Foote Co., Newark, N. J.  
 Sundberg, Krupp & Co., 1121-1131 W. 21st St., Chicago, Ill.  
 Tindel-Morris Co., Eddystone, Pa.  
 Transue & Williams Co., Alliance, O.  
 Western Malleable Steel Co., Detroit, Mich.  
 J. H. Williams & Co., Brooklyn, N. Y.  
 A. P. Witteman & Co., 1223 Spring St., Philadelphia, Pa.  
 Wyman & Gordon, Worcester, Mass.
- MERCHANTS.**  
 Buell & Mitchell, 120 Liberty St., N. Y.  
 Denman & Davis, 85-91 Lafayette St., New York.  
 Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.  
 O. B. Houston & Co., Girard Bldg., Philadelphia, Pa.  
 Homer F. Livermore, Boston, Mass.  
 Patriarche & Bell, 215 Pearl St., N. Y.  
 F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
 Pilling & Crane, Girard Bldg., Philadelphia, Pa.  
 Wheelock, Lovejoy & Co., 23 Cliff St., New York.
- Forgings, Steel Bar—**  
 Allegheny Forging Co., Pittsburgh, Pa.  
 Wm. Harris & Son, Pittsburgh, Pa.  
 Pennsylvania Forge Co., Philadelphia, Pa.  
 Thomas Prosser & Son, 26 Platt St., N.Y.
- Forgings, Steel, Special—**  
 Allegheny Forging Co., Pittsburgh, Pa.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Billings & Spencer Co., Hartford, Ct.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Block-Pollak Iron Co., Cincinnati, O.  
 Cambria Forge Co., Johnstown, Pa.  
 Canton Drop Forging & Mfg. Co., Canton, O.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Chicago Drop Forge & Foundry Co., Kensington, Ill.  
 E. D. Clamp Mfg. Co., Auburn, N. Y.  
 Cleveland City Forge & Iron Co., Cleveland, O.
- Consolidated Mfg. Co., Toledo, O.  
 Richard Eccles Co., Auburn, N. Y.  
 Erie Forge Co., Erie, Pa.  
 Farist Steel Co., Bridgeport, Ct.  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 General Drop Forge Co., Buffalo, N. Y.  
 Wm. Harris & Son, Pittsburgh, Pa.  
 Hay-Budden Mfg. Co., Brooklyn, N. Y.  
 Heppenstall Forge & Knife Co., Pittsburgh, Pa.  
 Indianapolis Drop Forging Co., Indianapolis, Ind.  
 Keystone Drop Forge Works, Chester, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
 Thomas Laughlin Co., Portland, Me.  
 Mesta Machine Co., Pittsburgh, Pa.  
 New Castle Forge & Bolt Co., New Castle, Pa.  
 Otis Steel Co., Ltd., Cleveland, O.  
 Park Drop Forge Co., Cleveland, O.  
 Pennsylvania Forge Co., Philadelphia, Pa.  
 Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
 Thomas Prosser & Son, 26 Platt St., N.Y.  
 Revere Drop Forge Co., Revere, Mass.  
 Richmond Forgings Corporation, Richmond, Va.  
 Strieby & Foote Co., Newark, N. J.  
 Transue & Williams Co., Alliance, O.  
 A. P. Witteman & Co., 1223 Spring St., Philadelphia, Pa.  
 Wyman & Gordon, Worcester, Mass.
- Forgings, Thrust Collar—**  
 Block-Pollak Iron Co., Cincinnati, O.
- Forgings, Well Bit—**  
 Keystone Drop Forge Works, Chester, Pa.
- Forgings, Wrought Iron—**  
 Allegheny Forging Co., Pittsburgh, Pa.  
 Block-Pollak Iron Co., Cincinnati, O.  
 Pennsylvania Forge Co., Philadelphia, Pa.
- Fork and Spade Handles—**  
 (See Handles, Fork, Spade, &c.)
- Forks, Baling Press—**  
 American Fork & Hoe Co., Cleveland, O.  
 John H. Graham & Co., 113 Chambers St., New York.
- Forks, Barley or Header—**  
 American Fork & Hoe Co., Cleveland, O.  
 John H. Graham & Co., 113 Chambers St., New York.
- Forks, Coke and Coal—**  
 American Fork & Hoe Co., Cleveland, O.  
 John H. Graham & Co., 113 Chambers St., New York.
- Forks, Cook—**  
 (See Forks, Kitchen.)
- Forks, Cotton Seed—**  
 American Fork & Hoe Co., Cleveland, O.
- Forks, Fish—**  
 American Fork & Hoe Co., Cleveland, O.  
 Arcade Mfg. Co., Freeport, Ill.
- Forks, Flesh—**  
 (See Kitchen Articles, Wire.)
- Forks, Fodder—**  
 American Fork & Hoe Co., Cleveland, O.
- Forks, Hay, Horse—**  
 (See Hay, Hay Tools.)
- Forks, Hay, Manure, Spading, &c.—**  
 American Fork & Hoe Co., Cleveland, O.  
 John H. Graham & Co., 113 Chambers St., New York.

**Forks, Hay Tedder—**  
Wm. D. Gibson Co., Huron and Kings-  
bury Sts., Chicago, Ill.

**Forks, Hotel—**  
(See Forks, Kitchen.)

**Forks, Ice—**  
(See Ice Harvesting Tools.)

**Forks, Kitchen—**  
American Cutlery Co., Chicago, Ill.  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Landers, Frary & Clark, New Britain, Ct.  
Standard Wire Co., New Castle, Pa.  
Wire Goods Co., Worcester, Mass.  
(See also Kitchen Articles, Wire.)

**Forks, Ore—**  
American Fork & Hoe Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers  
St., New York.

**Forks, Rail—**  
Hubbard & Co., Pittsburgh, Pa.

**Forks, Raising Pole—**  
Mathias Klein & Sons, 87-89 W. Van  
Buren St., Chicago, Ill.

**Forks, Silver Plated—**  
(See Spoons and Forks, Silver Plated.)

**Forks, Sluce—**  
American Fork & Hoe Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers  
St., New York.

**Forks, Spoons, &c., Silver  
and Silver Plated—**  
(See Spoons, Forks, &c., Silver and Sil-  
ver Plated.)

**Forks, Stone or Ballast—**  
American Fork & Hoe Co., Cleveland, O.

**Forks, Strawberry or Gar-  
den—**  
Wrightsville Hardware Co., Wrightsville,  
Pa.

**Forks, Tanners—**  
American Fork & Hoe Co., Cleveland, O.

**Forks, Tinned—**  
Lalanc & Grosjean Mfg. Co., 299 Broad-  
way, New York.

**Forks, Vegetable—**  
Goodell Co., Antrim, N. H.

**Forks, Wood—**  
American Fork & Hoe Co., Cleveland, O.

**Forkslides, Bicycle—**  
(See Bicycle Parts.)

**Forming and Bending Ma-  
chines—**

Adriance Machine Works, Brooklyn, N. Y.  
Ajax Mfg. Co., Cleveland, O.  
Badger State Machine Co., Janesville,  
Wis.

Baird Machine Co., Oakville, Ct.  
Bertsch & Co., Cambridge City, Ind.

Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.

Buffalo Forge Co., Buffalo, N. Y.  
Consolidated Press & Tool Co., Hastings,  
Mich.

Ferracute Machine Co., Bridgeton, N. J.  
Hilles & Jones Co., Wilmington, Del.

Long & Allstatter Co., Hamilton, O.  
National Machinery Co., Tiffin, O.

Niagara Machine & Tool Works, Buffalo,  
N. Y.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

George A. Ohl & Co., Newark, N. J.  
Pittsburgh Mfg. Co., Pittsburgh, Pa.

Wallace Supply Co., 19, So. Jefferson St.,  
Chicago, Ill.

Watson-Stillman Co., 50 Church St., N. Y.

Williams, White & Co., Moline, Ill.  
Zeh & Hahnemann Co., Newark, N. J.

**MERCHANTS.**  
Manning, Maxwell & Moore, Inc., 85-89  
Liberty St., New York.

Marshall & Buschart Machinery Co., 62  
S. Canal St., Chicago, Ill.

Joseph T. Byerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 No. Halsted  
St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.  
O. C. Wormer Machinery Co., Detroit,  
Mich.

**Forming and Blanking  
Sheet Metal—**  
(See Stamping Sheet Metal.)

**Forming, Bending, Fluting  
and Crimping Machines—**  
Royal Mfg. Co., Lancaster, Pa.

**Forming Machines, Auto-  
matic—**

Automatic Machine Co., Bridgeport, Ct.  
Baird Machine Co., Oakville, Ct.

Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.

Brown & Sharpe Mfg. Co., Providence,  
R. I.

Consolidated Press & Tool Co., Hastings,  
Mich.

Ferracute Machine Co., Bridgeton, N. J.  
Franklin Mfg. Co., New Haven, Ct.

Chas. Leffler & Co., Brooklyn, N. Y.  
Zeh & Hahnemann Co., Newark, N. J.

**Forming Machines, Barrel  
Hoop—**

Badger State Machine Co., Janesville,  
Wis.

F. B. Shuster Co., New Haven, Ct.

**Forming Machines, Can  
Body—**

E. W. Bliss Co., Brooklyn, N. Y.

**Forming Machines, Sheet  
Metal—**

Adriance Machine Works, Brooklyn, N. Y.  
Badger State Machine Co., Janesville,  
Wis.

Baird Machine Co., Oakville, Ct.  
Blake & Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.  
Consolidated Press & Tool Co., Hastings,  
Mich.

Ferracute Machine Co., Bridgeton, N. J.  
E. J. Manville Mach. Co., Waterbury, Ct.

Niagara Machine & Tool Works, Buffalo,  
N. Y.

F. B. Shuster Co., New Haven, Ct.  
Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

Zeh & Hahnemann Co., Newark, N. J.

**Forming Machines, Wire—**  
Adriance Machine Works, Brooklyn, N. Y.

Automatic Machine Co., Bridgeport, Ct.  
Badger State Machine Co., Janesville,  
Wis.

Baird Machine Co., Oakville, Ct.  
Blake & Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.  
Hoefler Mfg. Co., Freeport, Ill.

Chas. Leffler & Co., Brooklyn, N. Y.  
E. J. Manville Mach. Co., Waterbury, Ct.  
Morgan Spring Co., Worcester, Mass.

- A. H. Nilson Machine Co.,** Bridgeport, Ct.  
**F. B. Shuster Co.,** New Haven, Ct.  
**Waterbury, Farrol Foundry & Machine Co.,** Waterbury, Ct.  
**Zeh & Hahnemann Co.,** Newark, N. J.  
**Forms and Frames. Concrete and Cement—**  
**Star Expansion Bolt Co.,** 147-149 Cedar St., New York.  
**Forms, Dress and Coat—**  
**Edward Darby & Sons,** 233-235 Arch St., Philadelphia, Pa.  
**Philadelphia Steel & Wire Co.,** 525 Commerce St., Philadelphia, Pa.  
**Foundation and Sewer Gratings—**  
 (See Gratings, Foundation, Sewer, &c.)  
**Foundation Bolts—**  
 (See Bolts, Foundation.)  
**Foundation Rods—**  
 (See Rods, Tie.)  
**Foundry Cars, Facings, &c.—**  
 (See Cars, Facings, &c.)  
**Foundry Hardware Specialties, Brass Flask—**  
**Louis Sacks,** Newark, N. J.  
**Foundry Machines, Steel—**  
**Whiting Foundry Equipment Co.,** Harvey, Ill.  
**Foundry Plants—**  
**Browning Engineering Co.,** Cleveland, O.  
**Byram & Co., Inc.,** Detroit, Mich.  
**Hanna Engineering Works,** 840 Elston Ave., Chicago, Ill.  
**Interstate Engineering Co.,** Bedford, O.  
**Northern Engineering Works,** Detroit, Mich.  
**J. W. Paxson Co.,** Philadelphia, Pa.  
**John W. Seaver,** Cleveland, O.  
**Wellman-Seaver-Morgan Co.,** Cleveland, O.  
**Whiting Foundry Equipment Co.,** Harvey, Ill.  
**Ernst Wiener Co.,** Church and Fulton Sts., New York.  
**Foundry Riddles—**  
 (See Riddles and Sieves.)  
**Foundry Supplies—**  
**Atlas Car & Mfg. Co.,** Cleveland, O.  
**Byram & Co., Inc.,** Detroit, Mich.  
**Cleveland Galvanizing Works Co.,** Cleveland, O.  
**J. Gilmour, Bennett Bldg.,** New York.  
**Goldschmidt Thermit Co.,** 90 West St., New York.  
**Hanna Engineering Works,** 840 Elston Ave., Chicago, Ill.  
**Ingersoll-Rand Co.,** 11 Broadway, New York.  
**Monarch Engineering & Mfg. Co.,** Baltimore, Md.  
**Northern Engineering Works,** Detroit, Mich.  
**S. Obermayer Co.,** Cincinnati, O.  
**Oliver Machinery Co.,** Grand Rapids, Mich.  
**Oshorn Mfg. Co.,** Cleveland, O.  
**J. W. Paxson Co.,** Philadelphia, Pa.  
**Richmond Foundry & Mfg. Co., Inc.,** Richmond, Va.  
**Louis Sacks Foundry Co.,** Newark, N. J.  
**Smooth-On Mfg. Co.,** Jersey City, N. J.  
**Springfield Facing Co.,** Springfield, Mass.  
**Western Foundry Supply Co.,** 50 Church St., New York.  
**Whiting Foundry Equipment Co.,** Harvey, Ill.  
**Ernst Wiener Co.,** Church and Fulton Sts., New York.  
**Fountains, Drinking. Chicken—**  
**Dover Stamping & Mfg. Co.,** Cambridge, Mass.  
**Fountains, Drinking, Stock—**  
**Arcade Mfg. Co.,** Freeport, Ill.  
**Glen Mfg. Co.,** Ellwood City, Pa.  
**Humphrey Machine Co.,** Keene, N. H.  
**Stewart Iron Works Co.,** Cincinnati, O.  
**Fountains, Park, Lawn, &c.—**  
**Glen Mfg. Co.,** Ellwood City, Pa.  
**Stewart Iron Works Co.,** Cincinnati, O.  
**Foundriner Wire—**  
**W. S. Tyler Co.,** Cleveland, O.  
**Frame Setters—**  
 (See Setters, Frame or Angle.)  
**Frames, Automobile—**  
**Bethlehem Steel Co.,** So. Bethlehem, Pa.  
**John R. Keim Mills, Inc.,** Buffalo, N. Y.  
**Northern Engineering Works,** Detroit, Mich.  
**Thomas Prosser & Son,** 26 Platt St., N. Y.  
**Frames, Bag and Suit Case—**  
**B. C. Jenkinson & Co.,** Newark, N. J.  
**Frames, Binder—**  
**Jones & Laughlin Steel Co.,** Pittsburgh.  
**Frames, Bracket Saw—**  
**Millers Falls Co.,** 28 Warren St., N. Y.  
**Frames, Cabinet and Turning Saw—**  
**Henry Diston & Sons,** Philadelphia, Pa.  
**National Saw Co.,** Newark, N. J.  
**Frames, Card, Drawer—**  
**Eagle Lock Co.,** Terryville, Ot.  
**Reading Hardware Co.,** Reading, Pa.  
**Russell & Erwin Mfg. Co.,** 94-98 Lafayette St., New York.  
**Yale & Towne Mfg. Co.,** 9 Murray St., New York.  
**Frames, Engine—**  
**American Steel Foundries,** 42 Broadway, New York.  
**Frames, Grindstone—**  
**W. & B. Douglas,** Middletown, Ct.  
**Fox Machine Co.,** Grand Rapids, Mich.  
**Garvin Machine Co.,** Spring & Varick Sts., New York.  
**Niles-Bement-Pond Co.,** 111 Broadway, New York.  
**Oliver Machinery Co.,** Grand Rapids, Mich.  
**Whitman & Barnes Mfg. Co.,** Chicago, Ill.  
**Frames, Hack Saw—**  
 (See Saws, Hack, Blades and Frames.)  
**Frames, Photograph, Silver and Silver Plated—**  
**International Silver Co.,** Meriden, Ct.  
**Frames, Steel Car Truck—**  
**American Steel Foundries,** 42 Broadway, New York.  
**Frames, Steel, Iron or Brass—**  
**Standard Welding Co.,** Cleveland, O.  
**Frames, Turning Saw—**  
**Chapin-Stephens Co.,** Pine Meadow, Ct.  
**Henry Diston & Sons,** Philadelphia, Pa.

**Frames, Window, Metal—**  
(See Window Frames and Sash, Fire Proof.)

**Frames, Window Screen—**  
Arcade Mfg. Co., Freeport, Ill.  
**Frames, Wire Galvanizing or Tinning—**  
Morgan Construction Co., Worcester, Mass.

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Frames, Wood Saw—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.  
National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

**Freezers, Ice Cream—**  
Alaska Freezer Co., Winchendon, Mass.  
Dana Mfg. Co., Cincinnati, O.  
North Bros. Mfg. Co., Philadelphia, Pa.  
Richmond Cedar Works, Richmond, Va.  
Sturges & Burn Mfg. Co., Chicago, Ill.  
White Mountain Freezer Co., Nashua, N. H.

**Freezers, Machine or Power—**  
(See Freezers, Ice Cream.)

**Fret Saws—**  
(See Saws, Compass.)

**Froes, Coopers—**  
Hubbard & Co., Pittsburgh, Pa.

**Frogs, Railroad—**  
(See Switches and Frogs, Railroad.)

**Fronts, Building, Iron—**  
(See Structural Material.)

**Fronts, Building, Sheet Metal—**  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

**Fruit Bowls—**  
(See Bowls, Silver Plated.)

**Fruit Can Wax—**  
(See Wax, Fruit Can.)

**Fruit Dishes—**  
(See Dishes, Silver Plated.)

**Fry Pans—**  
(See Pans, Fry.)

**Fuel Oil Systems—**  
Petroleum Iron Works Co., Sharon, Pa.

**Fuller Balls, Rubber—**  
(See Balls, Fuller, Rubber.)

**Funnels, Crucible Charging—**  
W. J. Clark Co., Salem, O.

**Funnels, Overflow, Oil and Injector—**  
Lunkenheimer Co., Cincinnati, O.

**Furnace Charging Scales, Lamps—**  
(See Scales, Lamps.)

**Furnace Feeders for Shavings, Automatic—**  
Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

**Furnace Hoists or Fillers—**  
Brown Hoisting Machinery Co., Cleveland.

**Furnace Shovels—**  
(See Shovels and Scoops, Furnace.)

**Furnaces, Annealing—**  
American Gas Furnace Co., 23 John St., New York.

Brown & Sharpe Mfg. Co., Providence, R. I.

Crosby Co., Buffalo, N. Y.

Forster-Miller Engineering Co., Inc., Pittsburgh, Pa.

General Electric Co., Schenectady, N. Y.  
Kiln & Chimney Construction Co., Brooklyn, N. Y.

Monarch Engineering & Mfg. Co., Baltimore, Md.

Morgan Construction Co., Worcester, Mass.

J. W. Paxson Co., Philadelphia, Pa.

John W. Seaver, Cleveland, O.

Wm. Swindell & Bros., Pittsburgh, Pa.

Tate, Jones & Co., Inc., Pittsburgh, Pa.

Vollkommer & Co., Pittsburgh, Pa.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

Whiting Foundry Equipment Co., Harvey, Ill.

Wickes Bros., Saginaw, Mich.

Wright Wire Co., Worcester, Mass.

**Furnaces, Annealing, Lead—**  
Morgan Construction Co., Worcester, Mass.

U. S. Gas Furnace Co., Providence, R. I.

**Furnaces, Annealing, Lead, Wire—**  
Morgan Construction Co., Worcester, Mass.

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

Wright Wire Co., Worcester, Mass.

**Furnaces, Blast—**  
Forster-Miller Engineering Co., Inc., Pittsburgh, Pa.

Julian Kennedy, Pittsburgh, Pa.

Walter Kennedy, Pittsburgh, Pa.

Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.

G. W. McClure, Son & Co., Pittsburgh, Pa.

Arthur G. McKee, Cleveland, O.

Meehan Boiler & Construction Co., Lowellville, O.

Mesta Machine Co., Pittsburgh, Pa.

Pennsylvania Engineering Works, New Castle, Pa.

Petroleum Iron Works Co., Sharon, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

John W. Seaver, Cleveland, O.

S. R. Smythe Co., Pittsburgh, Pa.

**Furnaces, Boiler—**  
Hawley Down Draft Furnace Co., Chicago, Ill.

Kiln & Chimney Construction Co., Brooklyn, N. Y.

**Furnaces, Brass Melting—**  
Byram & Co., Inc., Detroit, Mich.

Hawley Down Draft Furnace Co., Chicago, Ill.

Kiln & Chimney Construction Co., Brooklyn, N. Y.

Monarch Engineering & Mfg. Co., Baltimore, Md.

Northern Engineering Works, Detroit, Mich.

S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., Philadelphia, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Louis Sacks Foundry Co., Newark, N. J.

S. R. Smythe Co., Pittsburgh, Pa.

Stow Flexible Shaft Co., 26th & Calhoun Sts., Philadelphia, Pa.

Wm. Swindell & Bros., Pittsburgh, Pa.

Tate, Jones & Co., Inc., Pittsburgh, Pa.

U. S. Gas Furnace Co., Providence, R. I.

Whiting Foundry Equipment Co., Harvey, Ill.

**Furnaces, Brazing—**  
American Gas Furnace Co., 23 John St., New York.

Globe Machine &amp; Stamping Co., Cleveland, O.

Monarch Engineering &amp; Mfg. Co., Baltimore, Md.

Turner Brass Works, Sycamore, Ill.

Vollkommer &amp; Co., Pittsburgh, Pa.

Waterbury Farrel Foundry &amp; Machine Co., Waterbury, Ct.

**Furnaces, Case Hardening—**  
American Gas Furnace Co., 23 John St., New York.

Brown &amp; Sharpe Mfg. Co., Providence, R. I.

Crosby Co., Buffalo, N. Y.

Krieger Tool &amp; Mfg. Co., 83 W. Randolph St., Chicago, Ill.

Monarch Engineering &amp; Mfg. Co., Baltimore, Md.

Tate, Jones &amp; Co., Inc., Pittsburgh, Pa.

Vollkommer &amp; Co., Pittsburgh, Pa.

**Furnaces, Chain Heating—**  
American Gas Furnace Co., 23 John St., New York.

Monarch Engineering &amp; Mfg. Co., Baltimore, Md.

Tate, Jones &amp; Co., Inc., Pittsburgh, Pa.

**Furnaces, Charcoal—**  
Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.**Furnaces, Crucible—**  
American Gas Furnace Co., 23 John St., New York.

Byram &amp; Co., Detroit, Mich.

Elmer &amp; Amend, 205 3d Ave., New York.

Porter-Miller Engineering Co., Inc., Pittsburgh, Pa.

Kiln &amp; Chimney Construction Co., Brooklyn, N. Y.

Alex. Laughlin &amp; Co., Pittsburgh, Pa.

Monarch Engineering &amp; Mfg. Co., Baltimore, Md.

S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., Philadelphia, Pa.

S. R. Smythe Co., Pittsburgh, Pa.

Wm. Swindell &amp; Bros., Pittsburgh, Pa.

Taylor Machinery Co., Boston, Mass.

Vollkommer &amp; Co., Pittsburgh, Pa.

**Furnaces, Dental, Force-lain—**  
Turner Brass Works, Sycamore, Ill.**Furnaces, Electric, for Steel Making—**  
R. H. Wolf, 445 Broadway, New York.**Furnaces, Electrically Heated—**  
Bristol Co., Waterbury, Ct.

Elmer &amp; Amend, 205 Third Ave., N. Y.

Charles Engelhard, 32 Cortlandt St., N. Y.

R. H. Wolf, 445 Broadway, New York.

**Furnaces, Enameling—**  
Vollkommer & Co., Pittsburgh, Pa.**Furnaces, Farmers' and Kitchen—**  
Stuart & Peterson Co., Burlington, N. J.**Furnaces, Flue Welding—**  
Monarch Engineering & Mfg. Co., Baltimore, Md.

Tate, Jones &amp; Co., Inc., Pittsburgh, Pa.

**Furnaces, Forging—**  
Acme Machinery Co., Cleveland, O.

Billings &amp; Spencer Co., Hartford, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Hawley Down Draft Furnace Co., Chicago, Ill.

Monarch Engineering &amp; Mfg. Co., Baltimore, Md.

Tate, Jones &amp; Co., Inc., Pittsburgh, Pa.

Vollkommer &amp; Co., Pittsburgh, Pa.

A. P. Witteman &amp; Co., 1223 Spring St., Philadelphia, Pa.

**Furnaces, Fuel Oil or Tar Melting—**  
American Gas Furnace Co., 23 John St., New York.

Chicago Flexible Shaft Co., 124-126 La Salle Ave., Chicago, Ill.

E. W. Bliss Co., Brooklyn, N. Y.

Hawley Down Draft Furnace Co., Chicago, Ill.

Monarch Engineering &amp; Mfg. Co., Baltimore, Md.

Stow Flexible Shaft Co., 26th &amp; Callowhill Sts., Philadelphia, Pa.

Tate, Jones &amp; Co., Inc., Pittsburgh, Pa.

Vollkommer &amp; Co., Pittsburgh, Pa.

**Furnaces, Gas Annealing—**  
American Gas Furnace Co., 23 John St., New York.

U. S. Gas Furnace Co., Providence, R. I.

**Furnaces, Gas Blast—**  
American Gas Furnace Co., 23 John St., New York.

Monarch Engineering &amp; Mfg. Co., Baltimore, Md.

Tate, Jones &amp; Co., Inc., Pittsburgh, Pa.

U. S. Gas Furnace Co., Providence, R. I.

Vollkommer &amp; Co., Pittsburgh, Pa.

**Furnaces, Gas, Brazing, Case Hardening, Chain Heating—**  
American Gas Furnace Co., 23 John St., New York.

Chicago Flexible Shaft Co., 124-126 La Salle Ave., Chicago, Ill.

Monarch Engineering &amp; Mfg. Co., Baltimore, Md.

Tate, Jones &amp; Co., Inc., Pittsburgh, Pa.

U. S. Gas Furnace Co., Providence, R. I.

**Furnaces, Gas, Crucible—**  
American Gas Furnace Co., 23 John St., New York.

Elmer &amp; Amend, 205 Third Ave., N. Y.

Hawley Down Draft Furnace Co., Chicago, Ill.

Monarch Engineering &amp; Mfg. Co., Baltimore, Md.

Tate, Jones &amp; Co., Inc., Pittsburgh, Pa.

Vollkommer &amp; Co., Pittsburgh, Pa.

**Furnaces, Gas or Oil, Annealing—**  
(See Furnaces, Gas Annealing.)**Furnaces, Gas Soldering—**  
Schneider & Trenkamp Co., Div. American Stove Co., Cleveland, O.**Furnaces, Glass—**  
Kiln & Chimney Construction Co., Brooklyn, N. Y.

S. R. Smythe Co., Pittsburgh, Pa.

Vollkommer &amp; Co., Pittsburgh, Pa.

**Furnaces, Heating—**  
Acme Machinery Co., Cleveland, O.

Billings &amp; Spencer Co., Hartford, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Porter-Miller Engineering Co., Inc., Pittsburgh, Pa.

- Julian Kennedy, Pittsburgh, Pa.  
 Walter Kennedy, Pittsburgh, Pa.  
 Alex Laughlin & Co., Pittsburgh, Pa.  
 G. W. McClure, Son & Co., Pittsburgh, Pa.  
 Arthur G. McKee, Cleveland, O.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 Morgan Construction Co., Worcester, Mass.
- John W. Seaver, Cleveland, O.  
 S. B. Smythe Co., Pittsburgh, Pa.  
 Stuart & Peterson Co., Burlington, N. J.  
 Wm. Swindell & Bros., Pittsburgh, Pa.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Vollkommer & Co., Pittsburgh, Pa.  
 Wellman-Seaver-Morgan Co., Cleveland, O.
- Furnaces, Kerosene—**  
 Barnes Tool Co., New Haven, Ct.
- Furnaces, Malleable—**  
 Hawley Down Draft Furnace Co., Chicago, Ill.
- John W. Seaver, Cleveland, O.  
 S. R. Smythe Co., Pittsburgh, Pa.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Vollkommer & Co., Pittsburgh, Pa.  
 Whiting Foundry Equipment Co., Harvey, Ill.
- Furnaces, Muffle—**  
 American Gas Furnace Co., 23 John St., N. Y.  
 Elmer & Amend, 205 3d Ave., New York.  
 Forter-Miller Engineering Co., Inc., Pittsburgh, Pa.  
 Kiln & Chimney Construction Co., Brooklyn, N. Y.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 Morgan Construction Co., Worcester, Mass.  
 S. R. Smythe Co., Pittsburgh, Pa.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Vollkommer & Co., Pittsburgh, Pa.
- Furnaces, Natural Gas—**  
 American Gas Furnace Co., 23 John St., New York.  
 Hawley Down Draft Furnace Co., Chicago, Ill.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Vollkommer & Co., Pittsburgh, Pa.
- Furnaces, Oil or Tar Melting—**  
 F. H. Evans, Brooklyn, N. Y.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.
- Furnaces, Open Hearth—**  
 Forter-Miller Engineering Co., Inc., Pittsburgh, Pa.  
 Julian Kennedy, Pittsburgh, Pa.  
 Walter Kennedy, Pittsburgh, Pa.  
 Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.  
 Alex Laughlin & Co., Pittsburgh, Pa.  
 G. W. McClure, Son & Co., Pittsburgh, Pa.  
 Arthur G. McKee, Cleveland, O.  
 Meehan Boiler & Construction Co., Lowellville, O.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 J. W. Paxson Co., Philadelphia, Pa.  
 Pennsylvania Engineering Works, New Castle, Pa.  
 Riter-Conley Mfg. Co., Pittsburgh, Pa.
- John W. Seaver, Cleveland, O.  
 S. R. Smythe Co., Pittsburgh, Pa.  
 Wm. Swindell & Bros., Pittsburgh, Pa.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Vollkommer & Co., Pittsburgh, Pa.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 Whiting Foundry Equipment Co., Harvey, Ill.
- Furnaces, Open Hearth, Water Cooled—**  
 Keystone Furnace Construction Co., Inc., Pittsburgh, Pa.
- Furnaces, Plumbers' and Tinnern—**  
 Barnes Tool Co., New Haven, Ct.  
 Clark Novelty Co., Rochester, N. Y.  
 Niagara Machine & Tool Works, Buffalo, N. Y.  
 Schneider & Trenkamp Div., Am. Stove Co., Cleveland, O.  
 Turner Brass Works, Sycamore, Ill.
- Furnaces, Portable, Lead, Gravel, Tar, &c.—**  
 F. H. Evans, Brooklyn, N. Y.  
 Stuart & Peterson Co., Burlington, N. J.
- Furnaces, Producer Gas Burning—**  
 Morgan Construction Co., Worcester, Mass.  
 Vollkommer & Co., Pittsburgh, Pa.
- Furnaces, Puddling—**  
 Hawley Down Draft Furnace Co., Chicago, Ill.  
 Alex Laughlin & Co., Pittsburgh, Pa.  
 S. R. Smythe Co., Pittsburgh, Pa.  
 Wm. Swindell & Bros., Pittsburgh, Pa.  
 Vollkommer & Co., Pittsburgh, Pa.
- Furnaces, Regenerative—**  
 Morgan Construction Co., Worcester, Mass.  
 Vollkommer & Co., Pittsburgh, Pa.
- Furnaces, Reheating—**  
 Morgan Construction Co., Worcester, Mass.  
 Vollkommer & Co., Pittsburgh, Pa.
- Furnaces, Rivet—**  
 American Gas Furnace Co., 23 John St., New York.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.
- Furnaces, Rivet, Oil or Gas—**  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.
- Furnaces, Rivet, Tar—**  
 F. H. Evans, Brooklyn, N. Y.
- Furnaces, Smelting—**  
 Hawley Down Draft Furnace Co., Chicago, Ill.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 Vollkommer & Co., Pittsburgh, Pa.
- Furnaces, Tempering—**  
 Chicago Flexible Shaft Co., 121-126 La Salle Ave., Chicago, Ill.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 U. S. Gas Furnace Co., Providence, R. I.  
 Vollkommer & Co., Pittsburgh, Pa.  
 A. P. Wittenman & Co., 1225 Spring St., Philadelphia, Pa.



**Furnaces, Tube Welding—**

Forster-Miller Engineering Co., Inc.,  
Pittsburgh, Pa.

Alex. Laughlin & Co., Pittsburgh, Pa.

Monarch Engineering & Mfg. Co., Balti-  
more, Md.

S. R. Smythe Co., Pittsburgh, Pa.

Tate, Jones & Co., Inc., Pittsburgh, Pa.

Vollkommer & Co., Pittsburgh, Pa.

**Furnaces, Warm Air—**

Hess-Snyder Co., Massillon, O.

**Furnaces, Water Jacket—**

Byram & Co., Detroit, Mich.

**Furnaces, Wire Brazing—**

American Gas Furnace Co., 23 John St.,  
New York.

**Furnaces, Wire Galva-**

nizing—

Morgan Construction Co., Worcester,  
Mass.

Turner, Vaughn & Taylor Co., Cuyahoga  
Falls, O.

**Furnaces, Wire Tinning—**

Morgan Construction Co., Worcester,  
Mass.

Turner, Vaughn & Taylor Co., Cuyahoga  
Falls, O.

**Furniture, Drafting Room—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Furniture, Ice, Steel—**

W. J. Clark Co., Salem, O.

General Fireproofing Co., Youngstown, O.

Van Dorn Iron Works Co., Cleveland, O.

**Fuse, Safety—**

Ensign-Bickford Co., Simsbury, Ct.

**Fused Quartz Ware—**

Charles Engelhard, 32 Cortlandt St., N. Y.

**Gable Ornaments—**

(See Architectural Sheet Metal Work.)

**Gadders—**

Ingersoll-Rand Co., 11 Broadway, New  
York.

**Gaining Machines—**

(See Wood Working Machines.)

**Galley Sheets—**

(See Sheets, Galley.)

**Galvanized Angles, Bars,**

Channels, &c.—

Cleveland Galvanizing Works, Cleveland.

McCance Bros. Co., Inc., Pittsburgh, Pa.

Nixtown Plate Washer Co., 1822-850 W.

Juniata St., Philadelphia, Pa.

Scully Steel & Iron Co., 69 Halsted St.,  
Chicago, Ill.

**MERCHANTS,**

Harold McCalla, 444 Fairmount Ave.,  
Philadelphia, Pa.

**Galvanized Bolts—**

(See Bolts, Galvanized.)

**Galvanized Iron, Cornice,**

&c.—

(See Cornice, &c., Galvanized Iron.)

**Galvanized Sheets—**

(See Sheets, Galvanized.)

**Galvanized Ware, Heavy, to**

Order—

Johnson Mfg. Co., Urbana, O.

**Galvanized Wire Guy**

Strand—

Broderick & Bascom Rope Co., St. Louis.

A. Leschen & Sons Rope Co., St. Louis.

**Galvanized Wire Rope—**

Broderick & Bascom Rope Co., St. Louis.

A. Leschen & Sons Rope Co., St. Louis.

Wright Wire Co., Palmer, Mass.

**Galvanized Wire Strand—**

(See Wires, Electrical.)

**Galvanizers' Flux—**

Sandoval Zinc Co., 122 No. Peoria St.,  
Chicago, Ill.

**Galvanizing—**

Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

American Iron & Steel Mfg. Co., Leba-  
non, Pa.

American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

Avery Stamping Co., Cleveland, O.

Bossert Electric Construction Co., Utica,  
N. Y.

Carnegie Steel Co., Pittsburgh, Pa.

Cleveland Galvanizing Works, Cleveland.

Dover Stamping & Mfg. Co., Cambridge,  
Mass.

Empire Foundry Co., New Brunswick,  
N. J.

Empire Iron & Steel Co., Niles, O.

Gem Mfg. Co., Boston, Mass.

Geuder, Paeschke & Frey Co., Milwau-  
kee, Wis.

M. Lanz & Sons, Pittsburgh, Pa.

Thomas Laughlin Co., Portland, Me.

McCance Bros. Co., Inc., Pittsburgh, Pa.

National Galvanizing Co., 749-759 Carol-  
ine Ave., Chicago, Ill.

Wm. B. Scafe & Sons Co., Pittsburgh, Pa.

United States Electro-Galvanizing Co.,  
Brooklyn, N. Y.

Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

Wright Wire Co., Worcester, Mass.

**Galvanizing, Automatic**

Handling Device for—

U. S. Electro Galvanizing Co., Brooklyn,  
N. Y.

**Galvanizing Machinery,**

Wire—

Humphrey & Sons, Joliet, Ill.

Morgan Construction Co., Worcester,  
Mass.

**Galvanizing Plants—**

Morgan Construction Co., Worcester,  
Mass.

F. R. Phillips & Sons Co., Pennsylvania  
Bldg., Philadelphia, Pa.

Riter-Conley Mfg. Co., Pittsburgh, Pa.

United Engineering & Foundry Co.,  
Pittsburgh, Pa.

U. S. Electro-Galvanizing Co., Brooklyn,  
N. Y.

**Galvanizing Plants, Elec-**

tro—

U. S. Electro-Galvanizing Co., Brooklyn,  
N. Y.

**Galvanizing Plants, Sher-**

ardizing—

Lunkenheimer Co., Cincinnati, O.

New Castle Forge & Bolt Co., New  
Castle, Pa.

**Galvanizing, Process of—**

Globe Machine & Stamping Co., Cleve-  
land, O.

U. S. Electro-Galvanizing Co., Brooklyn,  
N. Y.

**Game Traps—**

(See Traps.)

**Gang Saws—**

(See Saws, Gang.)

**Ganister—**  
American Refractories Co., Commercial  
National Bank Bldg., Chicago, Ill.  
**J. W. Paxson Co.,** Philadelphia, Pa.

**Garbage Cans—**  
(See Cans.)

**Garden Hoes—**  
(See Hoes, Garden, Field, Mortar, &c.)

**Garden Implements—**  
Bateman Mfg. Co., Grenloch, N. J.

**Garden Lines, Rakes,**

**Shears, &c.—**  
(See Lines, Rakes, Shears, &c.)

**Garden Tools—**  
(See Tools, Farm and Garden.)

**Gargoyles, Garlands, &c.—**  
(See Architectural Sheet Metal Work.)

**Garment Display Stands,**

**Hooks and Eyes, Stand**

**Bases—**  
(See Stands, Hooks and Eyes, Bases.)

**Garnet Paper—**  
(See Papers, Sand, Garnet, &c.)

**Gas and Electric Fixtures—**  
Bridgeport Brass Co., 253 Broadway, N. Y.

**E. M. Dart Mfg. Co.,** Providence, R. I.

**Westinghouse Electric & Mfg. Co.,** Pitts-

**burgh, Pa.**

**Gas Appliances, to Order—**  
Fred K. Wells Co., 18 Warren St., N. Y.

**Gas Buys—**  
(See Buys, Gas, Welded.)

**Gas - Composimeter**

**Recording—**  
Uehling Instrument Co., Passaic, N. J.

**Gas Cookers—**  
(See Plates, Hot Gas.)

**Gas Engine Parts—**  
National Cycle Mfg. Co., Bay City, Mich.

**Gas Machines—**  
American Gas Machine Co., Albert Lea,

**Minn.**

**Gas Pillars—**  
(See Pillars.)

**Gas Plant Machinery—**  
Morgan Construction Co., Worcester,

**Mass.**

**Riter-Conley Mfg. Co.,** Pittsburgh, Pa.

**Riverside Engine Co.,** Oil City, Pa.

**R. D. Wood & Co.,** 400 Chestnut St.,

**Philadelphia, Pa.**

**Gas Portables—**  
(See Portables, Gas.)

**Gas Producers—**  
(See Producers, Gas.)

**Gas Purification Systems,**

**blast Furnace—**  
S. B. Smythe Co., Pittsburgh, Pa.

**Gasnet Tubing—**  
Jenkins Bros., 71 John St., New York.

**Gaskets, Alloy, Plain and**

**Corrugated—**  
New York Washer & Gasket Co., Brook-

**lyn, N. Y.**

**U. S. Indestructible Gasket Co.,** 50

**Church St., New York.**

**Gaskets and Rings, Rub-**

**ber—**  
H. O. Canfield Co., Bridgeport, Ct.

**Jenkins Bros.,** 71 John St., New York.

**New York Belting & Packing Co.,** 91-93

**Chambers St., New York.**

**Gaskets, Asbestos—**  
Goodwin & Kintz Co., Winsted, Ct.

**Otto Konigslow Mfg. Co.,** Cleveland, O.

**Gaskets, Asbestos Filled**

**Copper—**  
New York Washer & Gasket Co., Brook-

**lyn, N. Y.**

**U. S. Indestructible Gasket Co.,** 50

**Church St., New York.**

**Gaskets, Copper—**  
Otto Konigslow Mfg. Co., Cleveland, O.

**N. Y. Washer & Gasket Co.,** Brooklyn, N. Y.

**U. S. Indestructible Gasket Co.,** 50

**Church St., New York.**

**Gaskets, Copper and Asbes-**

**tos—**  
Goodwin & Kintz Co., Winsted, Ct.

**Gaskets, Copper, Seamless—**  
Otto Konigslow Mfg. Co., Cleveland, O.

**New York Washer & Gasket Co.,** Brook-

**lyn, N. Y.**

**U. S. Indestructible Gasket Co.,** 50

**Church St., New York.**

**Gaskets, Corrugated Cop-**

**per and Bronze—**  
American Spiral Pipe Works, 48th Ave.

**and 14th St., Chicago, Ill.**

**U. T. Hungerford Brass & Copper Co.,**

**497-505 Pearl St., New York.**

**New York Washer & Gasket Co.,** Brook-

**lyn, N. Y.**

**Pittsburgh Valve, Foundry & Construc-**

**tion Co.,** Pittsburgh, Pa.

**Power Specialty Co.,** 111 Broadway, New

**York.**

**U. S. Indestructible Gasket Co.,** 50

**Church St., New York.**

**Gaskets, Corrugated Steel—**  
New York Washer & Gasket Co., Brook-

**lyn, N. Y.**

**U. S. Indestructible Gasket Co.,** 50

**Church St., New York.**

**Gaskets, Fiber, Wood, &c.—**  
J. M. Marston & Co., Boston, Mass.

**New York Washer & Gasket Co.,** Brook-

**lyn, N. Y.**

**U. S. Indestructible Gasket Co.,** 50

**Church St., New York.**

**Gaskets, Leather and Raw-**

**hide—**  
Graton & Knight Mfg. Co., Worcester,

**Mass.**

**J. M. Marston & Co.,** Boston, Mass.

**New York Washer & Gasket Co.,** Brook-

**lyn, N. Y.**

- U. S. Indestructible Gasket Co., 50 Church St., New York.
- Gaskets, Phosphor-Bronze—**  
N. Y. Washer & Gasket Co., Brooklyn, N. Y.
- Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.
- U. S. Indestructible Gasket Co., 50 Church St., New York.
- Gaskets, Rubber—**  
New York Washer & Gasket Co., Brooklyn, N. Y.
- U. S. Indestructible Gasket Co., 50 Church St., New York.
- Gaskets, Swedish Steel and Iron—**  
New York Washer & Gasket Co., Brooklyn, N. Y.
- U. S. Indestructible Gasket Co., 50 Church St., New York.
- Gaskets, to Order, for Special Conditions—**  
U. S. Indestructible Gasket Co., 50 Church St., New York.
- Gaskets, Wire—**  
New York Washer & Gasket Co., Brooklyn, N. Y.
- U. S. Indestructible Gasket Co., 50 Church St., New York.
- Gasoline Engines, Generators, &c.—**  
(See Engines, Generators, &c.)
- Gasoline Gas and Vapor Lamps—**  
(See Lamps.)
- Gate Hangers, Hinges, Hooks, &c.—**  
(See Hangers, Hinges, Hooks, &c.)
- Gate Rollers—**  
(See Hangers, Gate.)
- Gates, Automatic Elevator—**  
Webster & Perks Tool Co., Springfield, O.
- Gates, Automatic Hatch—**  
Salem Elevator Works, Salem, Mass.
- Warsaw Elevator Co., Warsaw, N. Y.
- Gates, Blast—**  
American Blower Co., Detroit, Mich.
- Bayley Mfg. Co., Milwaukee, Wis.
- Boston Blower Co., Hyde Park, Mass.
- Buffalo Forge Co., Buffalo, N. Y.
- Connorsville Blower Co., Connorsville, Ind.
- Eynon-Evans Mfg. Co., 1507 Clearfield St., Philadelphia, Pa.
- Miner & Peck Mfg. Co., New Haven, Ct.
- S. Obermayer Co., Cincinnati, O.
- J. W. Paxson Co., Philadelphia, Pa.
- Sterling Blower & Pipe Mfg. Co., Hartford, Ct.
- Gates, Cemetery Lot—**  
(See Fencing, Gates, &c.)
- Gates, Extension—**  
Buffalo Wire Works Co., Inc., Buffalo, N. Y.
- Dufur & Co., Baltimore, Md.
- Estey Wire Works Co., 69 Fulton St., New York.
- Ludlow-Saylor Wire Co., St. Louis, Mo.
- Stewart Iron Works Co., Cincinnati, O.
- W. S. Tyler Co., Cleveland, O.
- Wright Wire Co., Worcester, Mass.
- Gates, Fence—**  
(See Fencing, Gates, &c.)
- Gates, Hose—**  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.
- Gates, Oil and Molasses—**  
S. Cheney & Son, Manlius, N. Y.
- Charles Parker Co., Meriden, Ct.
- Taylor & Boggis Foundry Co., Cleveland.
- Gates, Safety Elevator—**  
Energy Elevator Co., 214 New St., Philadelphia, Pa.
- Salem Elevator Works, Salem, Mass.
- Gates, Walk and Driveway—**  
(See Fencing, Gates, &c.)
- Gates, Water—**  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.
- Gauge Boards, Marble and Wood—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashcroft Mfg. Co., 85 Liberty St., N. Y.
- Ashton Valve Co., Boston, Mass.
- Crosby Steam Gauge & Valve Co., Boston.
- Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.
- Gauge Cocks, Saws—**  
(See Cocks, Saws.)
- Gauge Cutting—**  
Crescent Machine Co., Leetonia, O.
- Gauge Testers, Dead Weight—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Gauges, Air Brake—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.
- Ashton Valve Co., Boston, Mass.
- Crosby Steam Gauge & Valve Co., Boston.
- Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.
- Gauges, Altitude—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.
- Ashton Valve Co., Boston, Mass.
- Crosby Steam Gauge & Valve Co., Boston.
- Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Gauges, Ammonia—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.
- Ashton Valve Co., Boston, Mass.
- Crosby Steam Gauge & Valve Co., Boston.
- Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.
- Gauges and Squares, Combined—**  
Brown & Sharpe Mfg. Co., Providence, R. I.
- H. H. Mayhew Co., Shelburne Falls, Mass.
- Gauges, Automobile—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.
- Ashton Valve Co., Boston, Mass.
- Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Ohio Brass Co., Mansfield, O.
- Gauges, Bit—**  
Millers Falls Co., 28 Warren St., N. Y.
- Stanley Rule & Level Co., New Britain, Ct.
- James Swan Co., Seymour, Ct.

**Gauges, Blast—**

Byram & Co., Inc., Detroit, Mich.  
S. Obermayer Co., Cincinnati, O.  
J. W. Faxon Co., Philadelphia, Pa.  
Vehting Instrument Co., Passaic, N. J.

**Gauges, Blast, Cupola—**

Byram & Co., Detroit, Mich.

**Gauges, Boiler Plate—**

Brown & Sharpe Mfg. Co., Providence,

R. I.

**Gauges, Bolt and Pipe—**

Pratt & Whitney Co., Hartford, Ct.

Wells Bros. Co., Greenfield, Mass.

**Gauges, Butt and Rabbet—**

Goodell-Pratt Co., Greenfield, Mass.

Stanley Rule & Level Co., New Brit-

ain, Ct.

**Gauges, Button—**

L. S. Starrett Co., Athol, Mass.

**Gauges, Caliper—**

Brown & Sharpe Mfg. Co., Providence,

R. I.

Morse Twist Drill & Machine Co., New

Bedford, Mass.

Schuchardt & Schutte, 90 West St.,

New York.

J. T. Slocumb Co., Providence, R. I.

L. S. Starrett Co., Athol, Mass.

Wiebusch & Hilger, Ltd., 106-110 Lafay-

ette St., New York.

J. H. Williams & Co., Brooklyn, N. Y.

**Gauges, Center—**

Brown & Sharpe Mfg. Co., Providence,

R. I.

Henry Disston & Sons, Philadelphia, Pa.

Goodell-Pratt Co., Greenfield, Mass.

Pratt & Whitney Co., Hartford, Ct.

Richmond Foundry & Mfg. Co., Inc.,

Richmond, Va.

L. S. Starrett Co., Athol, Mass.

**Gauges, Chisel—**

Stanley Rule & Level Co., New Brit-

ain, Ct.

**Gauges, Circumference—**

Pratt & Whitney Co., Hartford, Ct.

L. S. Starrett Co., Athol, Mass.

**Gauges, Clapboard—**

Stanley Rule & Level Co., New Brit-

ain, Ct.

**Gauges, Combination—**

Ashcroft Mfg. Co., 85 Liberty St., N. Y.

Billings & Spencer Co., Hartford, Ct.

Chapin-Stephens Co., Pine Meadow, Ct.

Henry Disston & Sons, Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Lib-

erty St., New York.

**Gauges, Cutting—**

Chapin-Stephens Co., Pine Meadow, Ct.

**Gauges, Decimal Sheet**

**Meta—**

Pratt & Whitney Co., Hartford, Ct.

**Gauges, Depth—**

Billings & Spencer Co., Hartford, Ct.

Brown & Sharpe Mfg. Co., Providence,

R. I.

Goodell-Pratt Co., Greenfield, Mass.

Schuchardt & Schutte, 90 West St.,

New York.

J. T. Slocumb Co., Providence, R. I.

L. S. Starrett Co., Athol, Mass.

**Gauges, Draft—**

American Steam Gauge & Valve Mfg.

Co., Boston,

Ashton Valve Co., Boston, Mass.

Bristol Co., Waterbury, Ct.

**Gauges, Drawing Knife—**

James Swan Co., Seymour, Ct.

**Gauges, Drill—**

Brown & Sharpe Mfg. Co., Providence,

R. I.

Cleveland Twist Drill Co., Cleveland, O.

Krieger Tool & Mfg. Co., 83 W. Ran-

dolph St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Lib-

erty St., New York.

Morse Twist Drill & Machine Co., New

Bedford, Mass.

Standard Tool Co., Cleveland, O.

L. S. Starrett Co., Athol, Mass.

**Gauges, Fillet—**

L. S. Starrett Co., Athol, Mass.

**Gauges, Height—**

Brown & Sharpe Mfg. Co., Providence,

R. I.

L. S. Starrett Co., Athol, Mass.

**Gauges, Hub—**

L. S. Starrett Co., Athol, Mass.

**Gauges, Hydraulic—**

American Steam Gauge & Valve Mfg. Co.,

Boston, Mass.

American Well Works, Aurora, Ill.

Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.

Ashton Valve Co., Boston, Mass.

Bristol Co., Waterbury, Ct.

Crosby Steam Gage & Valve Co., Boston.

Lunkenheimer Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85 Lib-

erty St., New York.

Watson-Stillman Co., 60 Church St., N. Y.

New York.

**Gauges, Illuminated Dial—**

Ashton Valve Co., Boston, Mass.

**Gauges, Inspector—**

Ashcroft Mfg. Co., 85 Liberty St., N. Y.

Manning, Maxwell & Moore, Inc., 85 Lib-

erty St., New York.

J. T. Slocumb Co., Providence, R. I.

L. S. Starrett Co., Athol, Mass.

**Gauges, Jobbers—**

(See Gauges, Drill.)

**Gauges, Jointer—**

Goodell-Pratt Co., Greenfield, Mass.

Millers Falls Co., 28 Warren St., N. Y.

**Gauges, Limit—**

Cleveland Twist Drill Co., Cleveland, O.

Pratt & Whitney Co., Hartford, Ct.

Wells Bros. Co., Greenfield, Mass.

**Gauges, Lumber—**

Lufkin Rule Co., Saginaw, Mich.

**Gauges, Marking, &c.—**

Billings & Spencer Co., Hartford, Ct.

Chapin-Stephens Co., Pine Meadow, Ct.

Henry Disston & Sons, Philadelphia, Pa.

Goodell-Pratt Co., Greenfield, Mass.

Otis A. Smith, Rockfall, Ct.

Stanley Rule & Level Co., New Britain,

Ct.

**Gauges, Master Car Build-**

**ers—**

Pratt & Whitney Co., Hartford, Ct.

**Gauges, Mercury—**

American Steam Gauge & Valve Mfg. Co.,

Boston, Mass.

Edward Brown & Son, 311 Walnut St.,

Philadelphia, Pa.

**Gauges, Metric—**

Brown & Sharpe Mfg. Co., Providence,

R. I.

Pratt & Whitney Co., Hartford, Ct.

J. T. Slocumb Co., Providence, R. I.

- L. S. Starrett Co., Athol, Mass.  
**Gauges, Micrometer—**  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 J. T. Slocumb Co., Providence, R. I.  
 L. S. Starrett Co., Athol, Mass.  
 Wells Bros. Co., Greenfield, Mass.  
**Gauges, Oil, Dynamo and Motor—**  
 Lunkenheimer Co., Cincinnati, O.  
**Gauges, Nail—**  
 Henry Daston & Sons, Philadelphia, Pa.  
**Gauges, Ordnance—**  
 Crosby Steam Gauge & Valve Co., Boston.  
**Gauges, Paper—**  
 L. S. Starrett Co., Athol, Mass.  
**Gauges, Piezometer—**  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
**Gauges, Plane—**  
 Goodell-Pratt Co., Greenfield, Mass.  
**Gauges, Plug and Ring—**  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cleveland Twist Drill Co., Cleveland, O.  
 R. M. Clough, Tolland, Ct.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 Pratt & Whitney Co., Hartford, Ct.  
 Wells Bros. Co., Greenfield, Mass.  
**Gauges, Pocket Caliper—**  
 Billings & Spencer Co., Hartford, Ct.  
 L. S. Starrett Co., Athol, Mass.  
**Gauges, Pressure—**  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft Mfg. Co., 85-89 Liberty St., N.Y.  
 Ashton Valve Co., Boston, Mass.  
 Crosby Steam Gauge & Valve Co., Boston.  
 Lunkenheimer Co., Cincinnati, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Pittsburgh Gauge & Supply Co., Pittsburgh, Pa.  
**Gauges, Pressure, Differential—**  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
**Gauges, Pressure Recording—**  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft Mfg. Co., 85-89 Liberty St., N.Y.  
 Ashton Valve Co., Boston, Mass.  
 Bristol Co., Waterbury, Ct.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Pittsburgh Gauge & Supply Co., Pittsburgh, Pa.  
**Gauges, Prismatic Water—**  
 Ashcroft Mfg. Co., 85-89 Liberty St., N.Y.  
**Gauges, Pyrometer, Steam—**  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft Mfg. Co., 85-89 Liberty St., N.Y.  
 Ashton Valve Co., Boston, Mass.  
 Crosby Steam Gauge & Valve Co., Boston.  
**Gauges, Radius—**  
 L. S. Starrett Co., Athol, Mass.  
**Gauges, Railroad Track—**  
 Sheffield Car Co., Three Rivers, Mich.  
**Gauges, Recording—**  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft Mfg. Co., 85-89 Liberty St., N.Y.  
 Ashton Valve Co., Boston, Mass.  
 Bristol Co., Waterbury, Ct.  
 Crosby Steam Gauge & Valve Co., Boston.  
 Uehling Instrument Co., Passaic, N. J.  
**Gauges, Recording, Light Pressure—**  
 Ashcroft Mfg. Co., 85 Liberty St., N.Y.  
 Bristol Co., Waterbury, Ct.  
 Uehling Instrument Co., Passaic, N. J.  
**Gauges, Recording, Light Vacuum—**  
 Ashcroft Mfg. Co., 85 Liberty St., N.Y.  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Bristol Co., Waterbury, Ct.  
 Uehling Instrument Co., Passaic, N. J.  
**Gauges, Rolling Mill—**  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Haines Gauge Co., Provident Bldg., Philadelphia, Pa.  
**Gauges, Rule—**  
 Caldwell Mfg. Co., Rochester, N. Y.  
**Gauges, Saw Tooth—**  
 E. C. Atkins & Co., Indianapolis, Ind.  
 Henry Daston & Sons, Philadelphia, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
**Gauges, Scratch, Surface, &—**  
 Billings & Spencer Co., Hartford, Ct.  
 Goodell-Pratt Co., Greenfield, Mass.  
 L. S. Starrett Co., Athol, Mass.  
**Gauges, Screw Pitch—**  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Butterfield & Co., Derby Line, Vt.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Pratt & Whitney Co., Hartford, Ct.  
 L. S. Starrett Co., Athol, Mass.  
 Wells Bros. Co., Greenfield, Mass.  
**Gauges, Sheet Metal—**  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Pratt & Whitney Co., Hartford, Ct.  
 L. S. Starrett Co., Athol, Mass.  
**Gauges, Snap—**  
 Billings & Spencer Co., Hartford, Ct.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cleveland Twist Drill Co., Cleveland, O.  
 Pratt & Whitney Co., Hartford, Ct.  
 Wells Bros. Co., Greenfield, Mass.  
**Gauges, Sole—**  
 L. S. Starrett Co., Athol, Mass.  
**Gauges, Stair—**  
 L. S. Starrett Co., Athol, Mass.  
**Gauges, Standard Test—**  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft Mfg. Co., 85-89 Liberty St., N.Y.  
 Ashton Valve Co., Boston, Mass.  
 Crosby Steam Gauge & Valve Co., Boston.  
**Gauges, Steam and Vacuum—**  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 American Well Works, Aurora, Ill.  
 Ashcroft Mfg. Co., 85-89 Liberty St., N.Y.  
 Ashton Valve Co., Boston, Mass.  
 Bristol Co., Waterbury, Ct.  
 Crosby Steam Gauge & Valve Co., Boston.  
 Lunkenheimer Company, Cincinnati, O.

**Manning, Maxwell & Moore, Inc.,** 85-89 Liberty St., New York.

**Gauges, Surface—**  
Billings & Spencer Co., Hartford, Ct.  
Brown & Sharpe Mfg. Co., Providence, R. I.

Goodell-Pratt Co., Greenfield, Mass.  
Hoggson & Pettis Mfg. Co., New Haven, Ct.

L. S. Starrett Co., Athol, Mass.

**Gauges, Taper—**  
L. S. Starrett Co., Athol, Mass.

**Gauges, Thickness—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

L. S. Starrett Co., Athol, Mass.

**Gauges, Thread—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

**Gauges, Tide—**  
Keuffel & Esser Co., 127 Fulton St., New York.

**Gauges, Track—**  
Hubbard & Co., Pittsburgh, Pa.  
Irving Mfg. & Tool Co., 157 Chambers St., New York.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Gauges, Twist Drill—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Standard Tool Co., Cleveland, O.

**Gauges, Vacuum Record-  
ing—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

Ashcroft Mfg. Co., 85 Liberty St., N. Y.

Ashton Valve Co., Boston, Mass.

Bristol Co., Waterbury, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

Uehling Instrument Co., Passaic, N. J.

**Gauges, Water—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.

American Well Works, Aurora, Ill.

Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.

Ashton Valve Co., Boston, Mass.

Crosby Steam Gage & Valve Co., Boston.

Lunkenheimer Company, Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Ohio Brass Co., Mansfield, O.

Wm. Powell Co., Cincinnati, O.

Walworth Mfg. Co., Boston, Mass.

**Gauges, Water Chain  
Lever—**

Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

**Gauges, Water Level, Re-  
cording—**

Bristol Co., Waterbury, Ct.

Keuffel & Esser Co., 127 Fulton St., New York.

**Gauges, Wire—**

E. C. Atkins & Co., Indianapolis, Ind.

Brown & Sharpe Mfg. Co., Providence, R. I.

Cleveland Twist Drill Co., Cleveland, O.

Henry Dington & Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.

Standard Tool Co., Cleveland, O.

L. S. Starrett Co., Athol, Mass.

Wright Wire Co., Worcester, Mass.

**Gear Blanks, Cutters, Plan-  
ers—**

(See Blanks, Cutters, Planers.)

**Gear Blanks, Rawhide—**

Horsburgh & Scott Co., Cleveland, O.

New Process Raw Hide Co., Syracuse, N. Y.

Quride Co., Syracuse, N. Y.

**Gear Blanks, Steel—**

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Thomas Prosser & Son, 28 Platt St., N. Y.

**Gear Cutting—**

Blake & Johnson Co., Waterbury, Ct.

Brown & Sharpe Mfg. Co., Providence, R. I.

Case Crane Co., Columbus, O.

Earle Gear & Machine Co., Stenton and Wyoming Ave., Philadelphia, Pa.

Fawcuss Machine Co., Pittsburgh, Pa.

Ferracute Machine Co., Bridgeton, N. J.

Foots Bros. Gear & Machine Co., 24-30 S. Clinton St., Chicago, Ill.

Wm. Gardam & Son, Inc., 221 Fulton St., New York.

Gleason Works, Rochester, N. Y.

Gould & Eberhardt, Newark, N. J.

Hardinge Bros., 1036 Lincoln Ave., Chicago, Ill.

Edwin Harrington, Son & Co., Inc., Philadelphia, Pa.

Horsburgh & Scott Co., Cleveland, O.

Humphrey & Sons, Joliet, Ill.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

W. B. Knight Machinery Co., St. Louis, Mo.

Morgan Construction Co., Worcester, Mass.

Newark Gear Cutting Machine Co., Newark, N. J.

New Process Raw Hide Co., Syracuse, N. Y.

Northern Engineering Works, Detroit, Mich.

R. D. Nuttall Co., Pittsburgh, Pa.

Poole Engineering & Machine Co., Baltimore, Md.

Pratt & Whitney Co., Hartford, Ct.

Quride Co., Syracuse, N. Y.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

Van Dorn & Dutton Co., Cleveland, O.

W. A. Wilson Machine Co., Rochester, N. Y.

**Gear Cutting Attachments  
for Milling Machines—**

Brown & Sharpe Mfg. Co., Providence, R. I.

**Gear Cutting Machines—**

Becker Milling Machine Co., Hyde Park, Mass.

Brown & Sharpe Mfg. Co., Providence, R. I.

Garvin Machine Co., Spring and Varick Sts., New York.

Gleason Works, Rochester, N. Y.

Gould & Eberhardt, Newark, N. J.

Edwin Harrington, Son & Co., Inc., Philadelphia, Pa.

National Tool Co., Cleveland, O.

Newark Gear Cutting Machine Co., Newark, N. J.

Newton Machine Tool Works, 23d & Vine  
Sta., Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.  
Pratt & Whitney Co., Hartford, Ct.  
Schuchardt & Schutte, 90 West St., N. Y.  
Waltham Machine Works, Waltham, Mass.  
D. E. Whiton Machine Co., New London,  
Ct.

## MERCHANTS.

Hill, Clarke & Co., Boston, Mass.  
Manning, Maxwell & Moore, Inc., 85-89  
Liberty St., New York.  
Marshall & Hirschart Machinery Co., 62-  
64 So. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co.,  
Cleveland, O.  
H. A. Stocker Machinery Co., 85 W. Ran-  
dolph St., Chicago, Ill.  
A. D. White Machinery Co., 39-41 S.  
Canal St., Chicago, Ill.  
C. C. Wormer Machinery Co., Detroit,  
Mich.

**Gear Cutting Tools—**

(See Cutters, Milling.)

**Gear Hobbing Machines—**

(See Gear Cutting Machines.)

**Gear Lubricants—**

(See Lubricants, Gear.)

**Gear Testing Machines—**

Morse Twist Drill & Machine Co., New  
Bedford, Mass.

**Gear Wheel Cutting, In-  
ternal—**

Brown & Sharpe Mfg. Co., Providence,  
R. I.  
Earle Gear & Machine Co., Stenton and  
Wyoming Ave., Philadelphia, Pa.  
Fawcuss Machine Co., Pittsburgh, Pa.  
Footo Bros. Gear & Machine Co., 24-30  
S. Clinton St., Chicago, Ill.  
Gleason Works, Rochester, N. Y.  
Gould & Eberhardt, Newark, N. J.  
New Process Raw Hide Co., Syracuse,  
N. Y.

R. D. Nuttall Co., Pittsburgh, Pa.  
Pratt & Whitney Co., Hartford, Ct.  
Stow Flexible Shaft Co., 26th & Callow-  
hill Sts., Philadelphia, Pa.  
Van Dorn & Dutton Co., Cleveland, O.

**Gearing, Mill—**

H. W. Caldwell & Son, Western Ave. &  
17th St., Chicago, Ill.  
Fawcuss Machine Co., Pittsburgh, Pa.  
W. A. Jones Foundry & Machine Co.,  
142-164 W. North Ave., Chicago, Ill.  
Morgan Construction Co., Worcester,  
Mass.

**Gearing, Worm—**

Boston Gear Works, Norfolk Downs, Mass.  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

H. W. Caldwell & Son Co., Western Ave.,  
17th and 18th Sts., Chicago, Ill.  
Geo. V. Cresson Co., 18th St. & Alle-  
gheny Ave., Philadelphia, Pa.  
G. Drouve Co., Bridgeport, Ct.  
Earle Gear & Machine Co., Stenton and  
Wyoming Ave., Philadelphia, Pa.  
Fawcuss Machine Co., Pittsburgh, Pa.  
Footo Bros. Gear & Machine Co., 24-30  
S. Clinton St., Chicago, Ill.  
Gleason Works, Rochester, N. Y.  
Gould & Eberhardt, Newark, N. J.  
Horsburgh & Scott Co., Cleveland, O.  
W. A. Jones Foundry & Machine Co.,  
142-164 W. North Ave., Chicago, Ill.

Newark Gear Cutting Machine Co., New-  
ark, N. J.

R. D. Nuttall Co., Pittsburgh, Pa.  
Philadelphia Roll & Machine Co., 23d  
St. and Washington Ave., Philadelphia.  
Poole Engineering & Machine Co., Balti-  
more, Md.

Van Dorn & Dutton Co., Cleveland, O.  
Warsaw Elevator Co., Warsaw, N. Y.

**Gears—**

Birmingham Iron Foundry, Derby, Ct.  
Boston Gear Works, Norfolk Downs, Mass.  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

H. W. Caldwell & Son Co., Western Ave.,  
17th and 18th Sts., Chicago, Ill.

W. E. Caldwell Co., Louisville, Ky.

Case Crane Co., Columbus, O.

Chicago Pneumatic Tool Co., Fisher  
Bldg., Chicago, Ill.

Geo. V. Cresson Co., 18th St. and Alle-  
gheny Ave., Philadelphia, Pa.

Earle Gear & Machine Co., Stenton and  
Wyoming Ave., Philadelphia, Pa.

Farrel Foundry & Mach. Co., Ansonia, Ct.

Fawcuss Machine Co., Pittsburgh, Pa.

A. W. Findlay Co., Inc., 23d and Market  
Sts., Philadelphia, Pa.

Footo Bros. Gear & Machine Co., 24-30  
S. Clinton St., Chicago, Ill.

Wm. Gardam & Sons, Inc., 221 Fulton  
St., New York.

A. Garrison Foundry Co., Pittsburgh,  
Pa.

Gleason Works, Rochester, N. Y.

Gould & Eberhardt, Newark, N. J.

E. Harrington, Son & Co., Inc., Phila-  
delphia, Pa.

Horsburgh & Scott, Cleveland, O.

Humphrey Machine Co., Keene, N. H.

Indestructible Metal Co., 50 Church  
St., New York.

W. A. Jones Foundry & Machine Co.,  
142-164 W. North Ave., Chicago, Ill.

Lebanon Steel Casting Co., Lebanon, Pa.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester,  
Mass.

Newark Gear Cutting Machine Co., New-  
ark, N. J.

New Process Raw Hide Co., Syracuse,  
N. Y.

R. D. Nuttall Co., Pittsburgh, Pa.

Philadelphia Roll & Machine Co., 23d St.  
and Washington Ave., Philadelphia.

Poole Engineering & Machine Co., Balti-  
more, Md.

Thomas Prosser & Son, 26 Platt St., N. Y.

Quiride Co., Syracuse, N. Y.

Schuchardt & Schutte, 90 West St., N. Y.

Soule Steam Feed Works, Meridian, Miss.

Stow Flexible Shaft Co., 26th and Callow-  
hill Sts., Philadelphia, Pa.

Van Dorn & Dutton Co., Cleveland, O.

Webster Mfg. Co., 1075-1111 W. 15th St.,  
Chicago, Ill.

Westinghouse Electric & Mfg. Co., Pitts-  
burgh, Pa.

Worcester Pressed Steel Co., Worcester,  
Mass.

**Gears, Automobile—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Brown & Sharpe Mfg. Co., Providence,  
R. I.

Earle Gear & Machine Co., Stenton and  
Wyoming Ave., Philadelphia, Pa.

Fawcuss Machine Co., Pittsburgh, Pa.  
 Foote Bros. Gear & Machine Co., 24-30  
 S. Clinton St., Chicago, Ill.  
 Gleason Works, Rochester, N. Y.  
 Horsburgh & Scott, Cleveland, O.  
 Otto Konigslow Mfg. Co., Cleveland, O.  
 New Process Raw Hide Co., Syracuse,  
 N. Y.  
 R. D. Nuttall Co., Pittsburgh, Pa.  
 Thomas Prosser & Son, 26 Platt St., N.Y.  
 Van Dorn & Dutton Co., Cleveland, O.

**Gears, Automobile Equalizing—**  
 Brown & Sharpe Mfg. Co., Providence,  
 R. I.

Fawcuss Machine Co., Pittsburgh, Pa.  
 Foote Bros. Gear & Machine Co., 24-30  
 S. Clinton St., Chicago, Ill.  
 Gleason Works, Rochester, N. Y.  
 New Process Raw Hide Co., Syracuse,  
 N. Y.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Gears, Bevel, Generated Teeth—**

Boston Gear Works, Norfolk Downs, Mass.

**Gears, Brass—**

Fawcuss Machine Co., Pittsburgh, Pa.  
 Poole Engineering & Machine Co., Balti-  
 more, Md.

Van Dorn & Dutton Co., Cleveland, O.

**Gears, Bronze—**

Phosphor-Bronze Smelting Co., Ltd., 2200  
 Washington Ave., Philadelphia, Pa.

United Engineering & Foundry Co.,  
 Pittsburgh, Pa.

**Gears, Cast Iron—**

Bethlehem Foundry & Machine Co., South  
 Bethlehem, Pa.

Birmingham Iron Foundry, Derby, Ct.  
 H. W. Caldwell & Son Co., Western Ave.  
 and 17th St., Chicago, Ill.

Geo. V. Cresson Co., 18th St. and Alle-  
 gheny Ave., Philadelphia, Pa.

Dodge Mfg. Co., Mishawaka, Ind.

Farral Foundry & Machine Co., Ansonia,  
 Ct.

Fawcuss Machine Co., Pittsburgh, Pa.

Humphrey Machine Co., Keene, N. H.

W. A. Jones Foundry & Machine Co.,  
 142-164 W. North Ave., Chicago, Ill.

Mackintosh, Hemphill & Co., Pittsburgh,  
 Pa.

Mesta Machine Co., Pittsburgh, Pa.

Pacific Iron Works, Bridgeport, Ct.

Philadelphia Roll & Machine Co., 23d St.  
 and Washington Ave., Philadelphia.

Poole Engineering & Machine Co., Balti-  
 more, Md.

United Engineering & Foundry Co.,  
 Pittsburgh, Pa.

Van Dorn & Dutton Co., Cleveland, O.

**Gears, Cast, Semi-Steel—**

Birmingham Iron Foundry, Derby, Ct.

H. W. Caldwell & Son Co., Western Ave.  
 & 17th St., Chicago, Ill.

**Gears, Cast Steel—**

H. W. Caldwell & Son Co., Western Ave.,  
 17th and 18th Sts., Chicago, Ill.

Fawcuss Machine Co., Pittsburgh, Pa.

W. A. Jones Foundry & Machine Co.,  
 142-164 W. North Ave., Chicago, Ill.

Lebanon Steel Casting Co., Lebanon, Pa.

Mackintosh, Hemphill & Co., Pittsburgh,  
 Pa.

Mesta Machine Co., Pittsburgh, Pa.

Taylor Iron & Steel Co., High Bridge,  
 N. J.

Tropenas Steel Co., New Castle, Del.

United Engineering & Foundry Co.,  
 Pittsburgh, Pa.

**Gears, Charcoal Gun Iron—**

Mesta Machine Co., Pittsburgh, Pa.

Poole Engineering Co., Baltimore, Md.

**Gears, Compensating Bevel—**

Brown & Sharpe Mfg. Co., Providence,  
 R. I.

Fawcuss Machine Co., Pittsburgh, Pa.

Foote Bros. Gear & Machine Co., 24-30  
 S. Clinton St., Chicago, Ill.

Gleason Works, Rochester, N. Y.

Horsburgh & Scott, Cleveland, O.

Mesta Machine Co., Pittsburgh, Pa.

New Process Raw Hide Co., Syracuse,  
 N. Y.

**Gears, Cut—**

Geo. V. Cresson & Co., 18th St. and  
 Allegheny Ave., Philadelphia, Pa.

Fawcuss Machine Co., Pittsburgh, Pa.

Foote Bros. Gear & Machine Co., 24-30  
 S. Clinton St., Chicago, Ill.

Horsburgh & Scott, Cleveland, O.

W. A. Jones Foundry & Machine Co.,  
 142-164 W. North Ave., Chicago, Ill.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester,  
 Mass.

Pacific Iron Works, Bridgeport, Ct.

Stow Flexible Shaft Co., 26th & Callow-  
 hill Sts., Philadelphia, Pa.

Taylor-Wilson Mfg. Co., McKees Rocks,  
 Pa.

United Engineering & Foundry Co.,  
 Pittsburgh, Pa.

Van Dorn & Dutton Co., Cleveland, O.

**Gears, Equalizing—**

Fawcuss Machine Co., Pittsburgh, Pa.

**Gears, Fiber—**

Fawcuss Machine Co., Pittsburgh, Pa.

New Process Raw Hide Co., Syracuse,  
 N. Y.

R. D. Nuttall Co., Pittsburgh, Pa.

Van Dorn & Dutton Co., Cleveland, O.

**Gears for Electric Rail-  
 ways—**

E. W. Bliss Co., Brooklyn, N. Y.

Van Dorn & Dutton Co., Cleveland, O.

**Gears, Forged Steel—**

E. W. Bliss Co., Brooklyn, N. Y.

Fawcuss Machine Co., Pittsburgh, Pa.

Foote Bros. Gear & Machine Co., 24-30  
 S. Clinton St., Chicago, Ill.

Horsburgh & Scott, Cleveland, O.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Gears, Generated Teeth—**

Newark Gear Cutting Machine Co., New-  
 ark, N. J.

**Gears, Helical—**

Boston Gear Works, Norfolk Downs,  
 Mass.

Poole Engineering & Machine Co., Balti-  
 more, Md.

**Gears, Intermittent—**

Boston Gear Works, Norfolk Downs,  
 Mass.

**Gears, Internal—**

Boston Gear Works, Norfolk Downs,  
 Mass.

Poole Engineering & Machine Co., Balti-  
 more, Md.



**Gears, Machine Molded—**

Birmingham Iron Foundry, Derby, Ct.  
H. W. Caldwell & Son Co., Western Ave.  
and 17th St., Chicago, Ill.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Fawcus Machine Co., Pittsburgh, Pa.  
Mesta Machine Co., Pittsburgh, Pa.  
Poole Engineering & Machine Co., Baltimore, Md.

Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

Van Dorn & Dutton Co., Cleveland, O.

**Gears, Marine Reverse—**

Fawcus Machine Co., Pittsburgh, Pa.  
Carlyle Johnson Machine Co., Hartford, Ct.

**Gears, Miter—**

Boston Gear Works, Norfolk Downs, Mass.

**Gears, Planed Bevel—**

H. W. Caldwell & Son Co., 17th St. and Western Ave., Chicago, Ill.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Fawcus Machine Co., Pittsburgh, Pa.

Footte Bros. Gear & Machine Co., 24-30 So. Canal St., Chicago, Ill.

Horsburgh & Scott, Cleveland, O.

Morgan Construction Co., Worcester, Mass.

Poole Engineering & Machine Co., Baltimore, Md.

Van Dorn & Dutton Co., Cleveland, O.

**Gears, Raw Hide—**

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Earle Gear & Machine Co., Stenton and Wyoming Ave., Philadelphia, Pa.

Fawcus Machine Co., Pittsburgh, Pa.

Footte Bros. Gear & Machine Co., 24-30 S. Clinton St., Chicago, Ill.

Gleason Works, Rochester, N. Y.

Horsburgh & Scott Co., Cleveland, O.

W. A. Jones Foundry & Machine Co., 141-161 W. North Ave., Chicago, Ill.

New Process Raw Hide Co., Syracuse, N. Y.

R. D. Nuttall Co., Pittsburgh, Pa.

Poole Engineering & Machine Co., Baltimore, Md.

Quirde Co., Syracuse, N. Y.

Van Dorn & Dutton Co., Cleveland, O.

**Gears, Semi-Steel—**

H. W. Caldwell & Son Co., 17th St. and Western Ave., Chicago, Ill.

Mackintosh, Hemphill & Co., Pittsburgh, Pa.

**Gears, Spiral—**

Boston Gear Works, Norfolk Downs, Mass.

**Gears, Spur—**

Boston Gear Works, Norfolk Downs, Mass.

**Gears, Steering—**

Thomas Laughlin Co., Portland, Me.

**Gears, Wood Cog—**

H. W. Caldwell & Son Co., Western Ave. & 17th St., Chicago, Ill.

Fawcus Machine Co., Pittsburgh, Pa.

Humphrey Machine Co., Keene, N. H.

Poole Engineering & Machine Co., Baltimore, Md.

**Gears, Worm Reduction—**

Boston Gear Works, Norfolk Downs, Mass.  
Footte Bros. Gear & Machine Co., 24-30 S. Clinton St., Chicago, Ill.

**Gem Pans—**

(See Pans, Gem.)

**Generators, Acetylene Gas—**

R. E. Dietz Co., 60 Laight St., N. Y.

**Generators, Electric—**

(See Dynamos.)

**Generators, Gas—**

American Gas Furnace Co., 23 John St., New York.

**Generators, Gasoline—**

American Gas Machine Co., Albert Lea, Minn.

**German Silver—**

Bridgeport Brass Co., 253 B'way, N. Y.

Homer F. Livermore, Boston, Mass.

Riverside Metal Co., Riverside, N. J.

Arthur T. Rutter & Co., 256 Broadway, New York.

Secvill Mfg. Co., Waterbury, Ct.

Seymour Mfg. Co., Seymour, Ct.

Waterbury Brass Co., Waterbury, Ct.

**German Silver Tubing—**

(See Tubing.)

**Gimlets and Gimlet Bits—**

Elmore Tool Mfg. Co., Hartford, Ct.

Goodell-Pratt Co., Greenfield, Mass.

C. E. Jennings & Co., 42 Murray St., New York.

H. H. Mayhew Co., Shelburne Falls, Mass.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Schuchardt & Schutte, 90 West St., N. Y.

Snell Mfg. Co., Fiskdale, Mass.

James Swan Co., Seymour, Ct.

**Gins, Ice Hoisting—**

Boston & Lockport Block Co., East Boston, Mass.

Gifford-Wood Co., Hudson, N. Y.

**Girder Clamps, Rails—**

(See Clamps, Rails.)

**Girders—**

(See Buildings and Bridges.)

**Glass Boards—**

(See Boards, Glass.)

**Glass Cutters, Glass Tube**

**Cutters—**

(See Cutters.)

**Glass Hooks, Tubes—**

(See Hooks, Tubes.)

**Glass, Quartz—**

Charles Engelhard, 32 Cortlandt St., N. Y.

**Glass Works Machinery—**

Wheeling Mold & Foundry Co., Wheeling, W. Va.

**Glasses, Gauge—**

American Steel Gauge & Valve Mfg. Co., Boston, Mass.

**Glasses Holders—**

(See Holders, Glasses.)

**Glasses, Level—**

Chapin-Stephens Co., Pine Meadow, Ct.

Henry Diaston & Sons, Philadelphia, Pa.

Keuffel & Esser Co., 127 Fulton St., New York.

Stanley Rule & Level Co., New Britain, Ct.

**Glasses, Opera, Field—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Glasses, Scotch Gauge—**

Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.

Lunkheimer Co., Cincinnati, O.

**Glasses, Shaving, Adjustable—**

Caldwell Mfg. Co., Rochester, N. Y.

**Glaziers' Points, Rules—**

(See Points, Rules.)

**Glove Boxes—**

(See Boxes, Silver Plated.)

**Glove Buttoners—**

(See Hooks, Button.)

**Glue—**

Baeder, Adamson & Co., 210 Chestnut St., Philadelphia, Pa.

B. F. Elwell Glue Co., Rockport, Mass.

**Glue for Emery Polishing**

**Wheels—**

U. S. Chemi Belting Co., 109 S. Jefferson St., Chicago, Ill.

**Glue Heaters—**

(See Heaters, Glue.)

**Glue, Liquid Fish—**

B. F. Elwell Glue Co., Rockport, Mass.

**Glue Presses—**

(See Presses, Glue.)

**Glue Room Appliances—**

Advance Machinery Co., Toledo, O.

Oliver Machinery Co., Grand Rapids, Mich.

**Glue Room Machinery—**

(See Machinery, Glue Room.)

**Glue Spreaders—**

(See Spreaders, Glue.)

**Gluing Machines—**

George A. Ohl & Co., Newark, N. J.

**Gold—**

Baker & Co., Inc., Newark, N. J.

**Gold or Platers' Metal—**

(See Metal, Platers' or Gold.)

**Gold Settings and Mountings—**

Baker & Co., Inc., Newark, N. J.

**Golf Head Lathes—**

(See Lathes, Golf Head.)

**Golf Irons—**

(See Irons, Golf.)

**Golf Link Rollers—**

(See Rollers, Lawn.)

**Gong Bells—**

(See Bells, Gong.)

**Gongs—**

H. A. Matthews Mfg. Co., Seymour, Ct.

Frank Mossberg Co., Attleboro, Mass.

Wm. Powell Co., Cincinnati, O.

Wallace Supply Co., 19 So. Jefferson St., Chicago, Ill.

**Gongs and Chimes, Altar—**

(See Bells, Altar and Lodge.)

**Gouges, Tanged, Socket—**

(See Chisels and Gouges.)

**Governors, Engine—**

Jarecki Mfg. Co., Erie, Pa.

**Governors, Pump—**

John H. McGowan Co., Cincinnati, O.

Mason Regulator Co., Boston, Mass.

**Governors, Tank—**

Mason Regulator Co., Boston, Mass.

**Grabs, Rafter—**

(See Grapples, Rafter.)

**Graders, Road—**

(See Levelers and Graders, Road.)

**Graduated Scales—**

(See Scales, Graduated.)

**Grain Cradles, Elevators.**

**Scales, Scoops—**

(See Cradles, Elevators, Scales, Scoops.)

**Grain Handling Machinery—**

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

Dodge Mfg. Co., Mishawaka, Ind.

Jeffrey Mfg. Co., Columbus, O.

Poole Engineering & Machine Co., Baltimore, Md.

Standard Clutch Mfg. Co., Sidney, O.

Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

**Grain Scouring Machines—**

Sidney Elevator Mfg. Co., Sidney, O.

**Granite Drills—**

(See Chisels and Drills.)

**Grape Hoes—**

(See Hoes, Grape.)

**Graphite—**

Jos. Dixon Crucible Co., Jersey City, N. J.

International Acheson Graphite Co., Niagara Falls, N. Y.

McCullough-Dalzell Crucible Co., Pittsburgh, Pa.

S. Obermayer Co., Cincinnati, O.

Springfield Facing Co., Springfield, Mass.

Western Foundry Supply Co., 50 Church St., New York.

**Graphite, Commutator**

**Brush—**

International Acheson Graphite Co., Niagara Falls, N. Y.

**Graphite, in Oil, Defloc-**

**culated—**

International Acheson Graphite Co., Niagara Falls, N. Y.

**Graphite in Water, Defloc-**

**culated—**

International Acheson Graphite Co., Niagara Falls, N. Y.

**Graphite, Lead Pencil—**

International Acheson Graphite Co., Niagara Falls, N. Y.

**Graphite, Piano Action—**

International Acheson Graphite Co., Niagara Falls, N. Y.

**Grapples, Ice—**

(See Ice Harvesting Tools.)

**Grapples, Rafter—**

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

F. E. Myers & Bro., Ashland, O.

Ney Mfg. Co., Canton, O.

**Grappling Irons—**

(See Irons, Grappling.)

**Grass Catchers and Collect-**

**ors—**

(See Catchers, Grass.)

**Grass Hook Handles—**

(See Handles, Grass Hook.)

**Grass Rods—**

(See Bolts, Heel.)

**Grate Bars—**

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

McClave-Brooks Co., Scranton, Pa.

R. Munroe & Sons Corporation, Pittsburgh, Pa.

Vitter Mfg. Co., Milwaukee, Wis.

Western Foundry & Sash Weight Co., 2d and Miller Sts., St. Louis, Mo.

**R. W. Whitehurst Co.**, Norfolk, Va.  
**Grate Bars, Shaking—**  
 McClave-Brooks Co., Scranton, Pa.  
 R. Munroe & Sons Corporation, Pittsburgh, Pa.

**Grate Guards—**  
 (See Guards, Grate.)

**Graters and Slaw Cutters, Combined—**

Lasher Mfg. Co., Davenport, Ia.

**Graters, Corn—**

Henry Disston & Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.

**Graters, Nutmeg—**

Caldwell Mfg. Co., Rochester, N. Y.

**Grates, Cut Off—**

McClave-Brooks Co., Scranton, Pa.

**Grates, Extension—**

(See Stove Repairs.)

**Grates, Mantel—**

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

**Grates, Parlor Gas—**

Schneider & Trenkamp Div., Am. Stove Co., Cleveland, O.

**Grates, Portable—**

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

**Grates, Shaking—**

McClave-Brooks Co., Scranton, Pa.

**Grating, Area—**

(See Iron Work, Builders'.)

**Gratings, Foundation, Sewer, &c.—**

(See Iron Work, Builders'.)

**Gratings, Wrought Iron—**

Fred J. Meyers Mfg. Co., Hamilton, O.

Standard Wire Co., New Castle, Pa.

**Gravel Furnaces—**

(See Furnaces, Portable, &c.)

**Gray Iron—**

Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

**Grease, Axle—**

Dearborn Drug & Chemical Works, Postal Telegraph Bldg., Chicago, Ill.

Jos. Dixon Crucible Co., Jersey City, N. J.

**Grease, Disc Grinder—**

Gardner Machine Co., Beloit, Wis.

**Grease for Pneumatic Tools—**

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

**Grease, Graphite—**

International Acheson Graphite Co., Niagara Falls, N. Y.

**Grease, Gun—**

Otto Konigslow Mfg. Co., Cleveland, O.

J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

**Grease, Waterproof—**

Jos. Dixon Crucible Co., Jersey City, N. J.

International Acheson Graphite Co., Niagara Falls, N. Y.

**Grease, Wire Rope—**

Broderick & Bascom Rope Co., St. Louis.

**Grid Resistance—**

(See Resistance, Grid, Electric.)

**Griddles, Cake—**

Advance Mfg. Co., Racine, Wis.

Avery Stamping Co., Cleveland, O.

S. Cheney & Son, Manlius, N. Y.

Stuart & Peterson Co., Burlington, N. J.

**Griddles, Cake, Electric—**  
 General Electric Co., Schenectady, N. Y.

**Griddles, Soapstone—**

Pike Mfg. Co., Pike, N. H.

**Griddles, Steel—**

(See Ware, Hollow Steel.)

**Grilles, Iron—**

(See Iron, Brass and Bronze, Ornamental.)

**Grinder Attachment for Disc—**

Royal Mfg. Co., Lancaster, Pa.

**Grinder Attachments, Harrow Disc—**

Luther Bros. Co., Milwaukee, Wis.

**Grinder Attachments, Twist Drill—**

Luther Bros. Co., Milwaukee, Wis.

**Grinders' and Polishers' Supplies—**

Carborundum Co., Niagara Falls, N. Y.

Diamond Machine Co., Providence, R. I.

Hanson & Van Winkle Co., Newark, N. J.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Northampton Emery Wheel Co., Leeds, Mass.

S. Obermayer Co., Cincinnati, O.

Zucker & Levett & Loeb Co., 525-530 West 35th St., New York.

**Grinders, Automatic Knife—**

Bridgeport Safety Emery Wheel Co., Inc., Bridgeport, Ct.

Diamond Machine Co., Providence, R. I.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Safety Emery Wheel Co., Springfield, O.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

**Grinders, Bench—**

Becker Milling Machine Co., Hyde Park, Mass.

Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

Brown & Sharpe Mfg. Co., Providence, R. I.

Builders' Iron Foundry, Providence, R. I.

Jas. Clark, Jr., Electric Co., Louisville, Ky.

Diamond Machine Co., Providence, R. I.

Goodell-Pratt Co., Greenfield, Mass.

Grant Mfg. & Machine Co., Bridgeport, Ct.

Oliver Machinery Co., Grand Rapids, Mich.

Pratt & Whitney Co., Hartford, Ct.

Ransom Mfg. Co., Oshkosh, Wis.

Safety Emery Wheel Co., Springfield, O.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

United States Electrical Tool Co., Cincinnati, O.

Vitrified Wheel Co., Westfield, Mass.

Washburn Shops, Worcester, Mass.

Webster & Perks Tool Co., Springfield, O.

#### MERCHANTS.

American Emery Wheel Works, Providence, R. I.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.

Motch & Merryweather Machinery Co., Cleveland, O.

F. P. Schielein Machinery Co., Pittsburgh, Pa.

H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.

Vandyck-Churchill Co., 8 Dey St., N. Y.  
Wickes Bros., Saginaw, Mich.  
C. C. Wormer Machinery Co., Detroit, Mich.

**Grinders, Car Wheel—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Springfield Mfg. Co., Bridgeport, Ct.

**Grinders, Chisel—**  
Millers Falls Co., 28 Warren St., N. Y.

**Grinders, Circular Saw—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Vandyck-Churchill Co., 8 Dey St., N. Y.

**Grinders, Cup, Cone and Hub—**  
Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

Safety Emery Wheel Co., Springfield, O.  
Sterling Emery Wheel Mfg. Co., Tiffin, O.

**Grinders, Cutter—**  
Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
Becker Milling Machine Co., Hyde Park, Mass.

Brown & Sharpe Mfg. Co., Providence, R. I.  
Cincinnati Milling Machine Co., Cincinnati, O.  
Jas. Clark, Jr., Electric Co., Louisville, Ky.

Diamond Machine Co., Providence, R. I.  
Garvin Machine Co., Spring & Varick Sts., New York.

Gould & Eberhardt, Newark, N. J.  
Ingersoll Milling Machine Co., Rockford, Ill.

W. H. Leland & Co., Worcester, Mass.  
National Machine Co., Hartford, Ct.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Pratt & Whitney Co., Hartford, Ct.  
United States Electrical Tool Co., Cincinnati, O.

F. E. Wells & Sons Co., Greenfield, Mass.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.  
Hill, Clarke & Co., Boston, Mass.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co., Cleveland, O.

Prentiss Tool & Supply Co., 115 Liberty St., New York.

F. P. Schlelein Machinery Co., Pittsburgh, Pa.  
Sterling Emery Wheel Mfg. Co., Tiffin, O.

H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.  
Vandyck-Churchill Co., 8 Dey St., N. Y.

A. O. Walworth & Co., 143-147 Clinton St., Chicago, Ill.  
C. C. Wormer Machinery Co., Detroit, Mich.

**Grinders, Cylinder—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

New Britain Machine Co., New Britain, Ct.  
United States Electrical Tool Co., Cincinnati, O.

**Grinders, Disc—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.  
Chas. H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.

Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

Crescent Machine Co., Leetonia, O.  
Diamond Machine Co., Providence, R. I.  
Fox Machine Co., Grand Rapids, Mich.  
Gardner Machine Co., Beloit, Wis.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Niles-Bement-Pond Co., 111 Broadway, New York.

O. K. Tool Holder Co., Shelton, Ct.  
Ransom Mfg. Co., Oshkosh, Wis.  
Safety Emery Wheel Co., Springfield, O.  
Taylor & Fenn Co., Hartford, Ct.

**Grinders, Drill—**

Diamond Machine Co., Providence, R. I.  
Garvin Machine Co., Spring & Varick Sts., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Niles-Bement-Pond Co., 111 Broadway, New York.

Royal Mfg. Co., Lancaster, Pa.  
Washburn Shops, Worcester, Mass.

**MERCHANTS.**

American Emery Wheel Works, Providence, R. I.

Brown & Zortman Machinery Co., Pittsburgh, Pa.

Hill, Clarke & Co., Boston, Mass.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.

F. P. Schlelein Machinery Co., Pittsburgh, Pa.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.

Vandyck-Churchill Co., 8 Dey St., N. Y.

Vitried Wheel Co., Westfield, Mass.

C. C. Wormer Machinery Co., Detroit, Mich.

**Grinders, Edge—**

Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.

**Grinders, Electric Driven—**

Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Cincinnati Electrical Tool Co., Cincinnati, O.

Jas. Clark, Jr., Electric Co., Louisville, Ky.

Luther Bros. Co., Milwaukee, Wis.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Ransom Mfg. Co., Oshkosh, Wis.

Safety Emery Wheel Co., Springfield, O.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

United States Electrical Tool Co., Cincinnati, O.

**Grinders, Foot and Hand Power—**

Goodell-Pratt Co., Greenfield, Mass.  
 Luther Bros. Co., Milwaukee, Wis.  
 Robertson Mfg. Co., Buffalo, N. Y.  
 Royal Mfg. Co., Lancaster, Pa.  
 El Starr Mfg. Co., Milwaukee, Wis.  
 Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Grinders for Chain Link Dies—**

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Grinders for Wire Nail Dies—**

Henry Perkins Co., Bridgewater, Mass.

**Grinders, Internal—**

Landis Tool Co., Waynesboro, Pa.

**Grinders, Knife and Scissors—**

American Emery Wheel Works, Providence, R. I.  
 Royal Mfg. Co., Lancaster, Pa.

**Grinders, Lathe—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
 Diamond Machine Co., Providence, R. I.  
 Grant Mfg. & Machine Co., Bridgeport, Ct.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 J. L. Osgood, Buffalo, N. Y.  
 Springfield Mfg. Co., Bridgeport, Ct.  
 United States Electrical Tool Co., Cincinnati, O.

**Grinders, Lathe Center—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
 Jas. Clark, Jr., Electric Co., Louisville, Ky.  
 Coates Clipper Mfg. Co., Worcester, Mass.  
 Diamond Machine Co., Providence, R. I.  
 Gem Mfg. Co., Pittsburgh, Pa.  
 Grant Mfg. & Machine Co., Bridgeport, Ct.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.  
 United States Electrical Tool Co., Cincinnati, O.

**Grinders, Lawn Mower—**

Coldwell Lawn Mower Co., Newburgh, N. Y.  
 Heath Foundry & Mfg. Co., Plymouth, O.  
 Royal Mfg. Co., Lancaster, Pa.  
 Springfield Mfg. Co., Bridgeport, Ct.

**Grinders, Machine Knife—**

Crescent Machine Co., Leetonia, O.

**Grinders, Mower Knife—**

Whitman & Barnes Mfg. Co., Chicago, Ill.

**Grinders, Nail Machine Knife—**

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Grinders, Planer Knife—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
 Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.  
 Diamond Machine Co., Providence, R. I.  
 Northampton Emery Wheel Co., Leeds Mass.  
 Oliver Machinery Co., Grand Rapids, Mich.

Safety Emery Wheel Co., Springfield, O.

**Grinders, Plow Share—**

Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.  
 Diamond Machine Co., Providence, R. I.  
 Safety Emery Wheel Co., Springfield, O.  
 Webster & Perks Tool Co., Springfield, O.

**Grinders, Portable—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
 Jas. Clark, Jr., Electric Co., Louisville, Ky.  
 Diamond Machine Co., Providence, R. I.  
 Gem Mfg. Co., Pittsburgh, Pa.  
 Luther Bros. Co., Milwaukee, Wis.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.  
 Stow Mfg. Co., Binghamton, N. Y.  
 United States Electrical Tool Co., Cincinnati, O.

**Grinders, Portable Outfit for Lathes and Planers—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

**Grinders, Portable, Pneumatic—**

Helwig Mfg. Co., St. Paul, Minn.  
**Grinders, Punch and Die—**  
 Springfield Mfg. Co., Bridgeport, Ct.  
**Grinders, Reamer—**  
 Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
 Becker Milling Machine Co., Hyde Park, Mass.  
 Cincinnati Milling Machine Co., Cincinnati, O.  
 Jas. Clark, Jr., Electric Co., Louisville, Ky.  
 Diamond Machine Co., Providence, R. I.  
 Garvin Machine Co., Spring & Varick Sts., New York.  
 Landis Tool Co., Waynesboro, Pa.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Pratt & Whitney Co., Hartford, Ct.  
 United States Electrical Tool Co., Cincinnati, O.  
 F. E. Wells & Sons Co., Greenfield, Mass.

**MERCHANTS.**

Brown & Zortman Machinery Co., Pittsburgh, Pa.  
 Hill, Clarke & Co., Boston, Mass.  
 Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
 Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
 Motch & Merryweather Machinery Co., Cleveland, O.  
 H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.

**O. C. Wormer Machinery Co.,** Detroit, Mich.

**Grinders, Roll—**  
Case Crane Co., Columbus, O.  
Diamond Machine Co., Providence, R. I.  
Farrel Foundry & Machine Co., Ansonia, Ct.  
E. Harrington, Son & Co., Inc., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Safety Emery Wheel Co., Springfield, O.  
Springfield Mfg. Co., Bridgeport, Ct.  
United States Electrical Tool Co., Cincinnati, O.

**Grinders, Rotary Shear—**  
Springfield Mfg. Co., Bridgeport, Ct.

**Grinders, Shafting—**  
Diamond Machine Co., Providence, R. I.  
Springfield Mfg. Co., Bridgeport, Ct.  
United States Electrical Tool Co., Cincinnati, O.

**Grinders, Sickle—**  
Luther Bros. Co., Milwaukee, Wis.  
Royal Mfg. Co., Lancaster, Pa.  
Whitman & Barnes Mfg. Co., Chicago, Ill.

**Grinders, Skate—**  
Luther Bros. Co., Milwaukee, Wis.

**Grinders, Surface—**  
Chas. H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.  
Bignall & Keeler Mfg. Co., Edwardsville, Ill.

Blake & Johnson Co., Waterbury, Ct.  
Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

Brown & Sharpe Mfg. Co., Providence, R. I.  
Jas. Clark, Jr., Electric Co., Louisville, Ky.

Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.

Diamond Machine Co., Providence, R. I.  
Garvin Machine Co., Spring and Varick Sts., New York.

Goodell-Pratt Co., Greenfield, Mass.  
Grant Mfg. & Machine Co., Bridgeport, Ct.

Landis Tool Co., Waynesboro, Pa.  
National Machine Co., Hartford, Ct.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Ransom Mfg. Co., Oshkosh, Wis.  
Robinson Tool Works, Waterbury, Ct.  
Safety Emery Wheel Co., Springfield, O.  
Springfield Mfg. Co., Bridgeport, Ct.  
Stow Flexible Shaft Co., 28th and Callowhill Sts., Philadelphia, Pa.  
United States Electrical Tool Co., Cincinnati, O.

**MERCHANTS.**  
Baird Machinery Co., Pittsburgh, Pa.  
Hill, Clarke & Co., Boston, Mass.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co., Cleveland, O.  
H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.  
Vandyck-Churchill Co., 8 Dey St., N. Y.  
A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

**C. C. Wormer Machinery Co.,** Detroit, Mich.

**Grinders, Swing Frame—**  
Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.  
Diamond Machine Co., Providence, R. I.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Safety Emery Wheel Co., Springfield, O.  
Sterling Emery Wheel Mfg. Co., Tiffin, O.

**Grinders, Tool—**  
W. F. & J. Barnes Co., Rockford, Ill.  
Becker Milling Machine Co., Hyde Park, Mass.

Blake & Johnson Co., Waterbury, Ct.  
J. C. Blount Co., Everett, Mass.

Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

Brown & Sharpe Mfg. Co., Providence, R. I.

Cincinnati Milling Machine Co., Cincinnati, O.

Jas. Clark, Jr., Electric Co., Louisville, Ky.

Diamond Machine Co., Providence, R. I.  
Fox Machine Co., Grand Rapids, Mich.

Garvin Machine Co., Spring and Varick Sts., New York.

Gould & Eberhardt, Newark, N. J.  
Luther Bros. Co., Milwaukee, Wis.

National Machine Co., Hartford, Ct.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Northampton Emery Wheel Co., Leeds, Mass.

Pike Mfg. Co., Pike, N. H.  
Ransom Mfg. Co., Oshkosh, Wis.

Robertson Drill & Tool Co., Buffalo, N. Y.

Rockford Drilling Machine Co., Rockford, Ill.

Royal Mfg. Co., Lancaster, Pa.  
Safety Emery Wheel Co., Springfield, O.

Springfield Mfg. Co., Bridgeport, Ct.  
El Starr Mfg. Co., Milwaukee, Wis.

Sterling Emery Wheel Mfg. Co., Tiffin, O.  
United States Electrical Tool Co., Cincinnati, O.

Washburn Shops, Worcester, Mass.  
Webster & Perks Tool Co., Springfield, O.

F. E. Wells & Sons Co., Greenfield, Mass.

Whitney Mfg. Co., Hartford, Ct.

# **MERCHANTS.**

Brown & Zortman Machinery Co., Pittsburgh, Pa.

Hill, Clarke & Co., Boston, Mass.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.

Edgar M. Moore & Co., Pittsburgh, Pa.  
Motch & Merryweather Machinery Co., Cleveland, O.

H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.

Vandyck-Churchill Co., 8 Dey St., N. Y.  
Vitrified Wheel Co., Westfield, Mass.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.  
O. C. Wormer Machinery Co., Detroit, Mich.

**Grinders, Universal—**

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cincinnati Milling Machine Co., Cincinnati, O.  
 Garvin Machine Co., Spring and Varick Sts., New York.  
 Landis Tool Co., Waynesboro, Pa.  
 W. H. Leland & Co., Worcester, Mass.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
 F. E. Wells & Sons Co., Greenfield, Mass.

**MERCHANTS.**

Hill, Clarke & Co., Boston, Mass.  
 Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
 Marshall & Huscourt Machinery Co., 62 S. Canal St., Chicago, Ill.  
 H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.  
 A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
 C. C. Wormer Machinery Co., Detroit, Mich.

**Grinders, Universal Cutter—**  
 R. K. Le Blond Machine Tool Co., Cincinnati, O.

**Grinding Machine Attachments—**

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Gem Mfg. Co., Pittsburgh, Pa.  
**Grinding Machines—**  
 American Blower Co., Detroit, Mich.  
 American Shearer Mfg. Co., Nashua, N. H.  
 E. C. Atkins & Co., Indianapolis, Ind.  
 Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.  
 Blake & Johnson Co., Waterbury, Ct.  
 J. C. Blount Co., Everett, Mass.  
 Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.  
 Brown & Sharpe Mfg. Co., Providence, R. I.

Builders Iron Foundry, Providence, R. I.  
 Chicago Machine Tool Co., Chicago, Ill.  
 Cincinnati Milling Machine Co., Cincinnati, O.

Jas. Clark, Jr., Electric Co., Louisville, Ky.  
 Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.

Diamond Machine Co., Providence, R. I.  
 Henry Disston & Sons, Philadelphia, Pa.  
 Dodge Mfg. Co., Mishawaka, Ind.  
 Eepen-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.

Fox Machine Co., Grand Rapids, Mich.  
 Garvin Machine Co., Spring and Varick Sts., New York.

Goodell-Pratt Co., Greenfield, Mass.  
 Grant Mfg. & Machine Co., Bridgeport, Ct.

Hanson & Van Winkle Co., Newark, N. J.  
 W. H. Leland & Co., Worcester, Mass.  
 H. J. Miller's Sons, Bridgewater, Mass.  
 National Machine Co., Hartford, Ct.

Niles-Bement-Pond Co., 111 Broadway, New York.  
 Southampton Emery Wheel Co., Leeds, Mass.

Oliver Machinery Co., Grand Rapids, Mich.

Henry Perkins Co., Bridgewater, Mass.  
 Pratt & Whitney Co., Hartford, Ct.

Ransom Mfg. Co., Oshkosh, Wis.  
 Richard Mfg. Co., Bloomsburgh, Pa.

Robertson Mfg. Co., Buffalo, N. Y.  
 Safety Emery Wheel Co., Springfield, O.

Schuchardt & Schutte, 90 West St., N.Y.  
 Springfield Mfg. Co., Bridgeport, Ct.

Sterling Emery Wheel Mfg. Co., Tiffin, O.  
 Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

Stow Mfg. Co., Binghamton, N. Y.  
 United States Electrical Tool Co., Cincinnati, O.

Vitrified Wheel Co., Westfield, Mass.  
 Waltham Machine Works, Waltham, Mass.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
 Webster & Perks Tool Co., Springfield, O.

F. E. Wells & Sons Co., Greenfield, Mass.  
 Zucker & Levett & Loeb Co., 526-530 West 25th St., New York.

**MERCHANTS.**

American Emery Wheel Works, Providence, R. I.

Baird Machinery Co., Pittsburgh, Pa.  
 Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.

Hannon-Finton Co., Springfield, Mass.  
 Hill, Clarke & Co., Boston, Mass.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Marshall & Huscourt Machinery Co., 62-64 So. Canal St., Chicago, Ill.  
 McDowell, Stocker & Co., 59 So. Canal St., Chicago, Ill.

Motch & Merryweather Machinery Co., Cleveland, O.

Wm. S. Nicholls, 253 Broadway, N. Y.  
 Prentiss Tool & Supply Co., 115 Liberty St., New York.

H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.

Taylor Machinery Co., Boston, Mass.  
 Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.

Vandyck-Churchill Co., 8 Dey St., N. Y.  
 A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.  
 C. C. Wormer Machinery Co., Detroit, Mich.

**Grinding Machines, Automatic Sizing—**  
 Pratt & Whitney Co., Hartford, Ct.

**Grinding Machines, Bushing—**  
 Grant Mfg. & Machine Co., Bridgeport, Ct.

**Grinding Machines for Multiple Throw Crank Shafts—**  
 Tindel-Morris Co., Eddystone, Pa.

**Grinding Machines, Open Side—**  
 Detrick & Harvey Machine Co., Baltimore, Md.

**Grinding Machines, Plain—**  
 Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.

Landis Tool Co., Waynesboro, Pa.

**Grinding Machines, Vertical—**

Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.  
Pratt & Whitney Co., New Haven, Ct.

**Grindstone Bearings—**

Bancroft & Co., Philadelphia, Pa.  
**Grindstone Boxes—**  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Grindstone Fixtures—**

Cleveland Stone Co., Cleveland, O.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
W. & B. Douglas, Middletown, Ct.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.  
Richards Mfg. Co., Aurora, Ill.  
Susquehanna Casting Co., Wrightsville, Pa.

Wrightsville Hardware Co., Wrightsville, Pa.

**Grindstone Truing Devices—**

Chas. H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.

**Grindstones, Family—**

Cleveland Stone Co., Cleveland, O.  
Millers Falls Co., 28 Warren St., N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Pike Mfg. Co., Pike, N. H.  
Reading Hardware Co., Reading, Pa.  
Richards Mfg. Co., Aurora, Ill.

**Grindstones, Mounted—**

Cleveland Stone Co., Cleveland, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Richards Mfg. Co., Aurora, Ill.  
Whitman & Barnes Mfg. Co., Chicago.

**Grindstones, Razor—**

Pike Mfg. Co., Pike, N. H.

**Grindstones, Unmounted—**

Cleveland Stone Co., Cleveland, O.  
Pike Mfg. Co., Pike, N. H.

**Grips, Bicycle—**

J. S. Leng's Son & Co., 33 Murray St., New York.

**Grips, Cable—**

Broderick & Bascom Rope Co., St. Louis.  
A. Leschen & Sons Rope Co., St. Louis.

**Grips, Cord and Line—**

Samson Cordage Works, Boston, Mass.

**Grips, Wire—**

(See Clamps, Come-Along, Lineman's.)  
(See Taps, Malleable D Handle.)

**Grips, Wood, Malleable D's—**

(See Taps, Malleable D Handle.)

**Grommets, Metallic—**

Allegheny Forging Co., Pittsburgh, Pa.  
Bettcher Mfg. Co., Cleveland, O.  
New York Washer & Gasket Co., Brooklyn, N. Y.

Arthur T. Rutter & Co., 256 Broadway, New York.  
Scovill Mfg. Co., Waterbury, Ct.  
Waterbury Brass Co., Waterbury, Ct.

**Grooming Machines—**

American Shearer Mfg. Co., Nashua, N. H.  
Chicago Flexible Shaft Co., La Salle Ave. & Ontario St., Chicago, Ill.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Grooving Machines—**

E. W. Bliss Co., Brooklyn, N. Y.

Fox Machine Co., Grand Rapids, Mich.  
Niagara Machine & Tool Works, Buffalo, N. Y.

George A. Ohl & Co., Newark, N. J.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Pratt & Whitney Co., Hartford, Ct.

**Guards, Bicycle—**

Otto Konigslow Mfg. Co., Cleveland, O.  
Sturges & Burn Mfg. Co., Chicago, Ill.  
Turner Brass Works, Sycamore, Ill.

**Guards, Corner, Wheel—**

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

**Guards, &c., Elevator—**

Buffalo Wire Works Co., Buffalo, N. Y.  
Clinton Wire Cloth Co., Clinton, Mass.  
Forest City Steel & Iron Co., Cleveland, O.

Howard & Morse, 45 Fulton St., N. Y.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
W. S. Tyler Co., Cleveland, O.

Wright Wire Co., Worcester, Mass.

**Guards, Fan, Electric—**

Andrew B. Hendryx Co., New Haven, Ct.

**Guards, Flower, Lawn and Tomato—**

Anchor Post Iron Works, 27 Cortlandt St., New York.

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

Cyclone Fence Co., Waukegan, Ill.  
De Kalb Fence Co., De Kalb, Ill.

Dufur & Co., Baltimore, Md.  
Nimmo Fence & Wire Works Co., Norwood, O.

Spencer Wire Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.

**Guards, Gas and Electric Light—**

(See Guards, Lamp and Light.)  
**Guards, Gate—**

Buffalo Wire Works Co., Buffalo, N. Y.  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Lacey Wire Works Co., 59 Fulton St., New York.

Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Glen Mfg. Co., Ellwood City, Pa.

Howard & Morse, 45 Fulton St., N. Y.  
S. M. Howes Co., Boston, Mass.

Ludlow-Saylor Wire Co., St. Louis, Mo.  
Fred J. Meyers Mfg. Co., Hamilton, O.

W. S. Tyler Co., Cleveland, O.

**Guards, Grave—**

Buffalo Wire Works Co., Buffalo, N. Y.  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Lacey Wire Works Co., 59 Fulton St., New York.

Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Glen Mfg. Co., Ellwood City, Pa.

Ludlow-Saylor Wire Co., St. Louis, Mo.  
Fred J. Meyers Mfg. Co., Hamilton, O.

Spencer Wire Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.

**Guards, Lamp and Light—**

Andrews Wire & Iron Works, Rockford, Ill.

Buffalo Wire Works Co., Inc., Buffalo, N. Y.



Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.  
 Estey Wire Works Co., 59 Fulton St., New York.  
 Ludlow-Saylor Wire Co., St. Louis, Mo.  
 Fred J. Meyers Mfg. Co., Hamilton, O.  
 Parker Wire Goods Co., Worcester, Mass.  
 Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
 Standard Wire Co., Bridgeport, Ct.  
 Wire Goods Co., Worcester, Mass.

#### **Guards, Radiator—**

Buffalo Wire Works Co., Inc., Buffalo, N. Y.  
 Clinton Wire Cloth Co., Clinton, Mass.  
 Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.  
 Wright Wire Co., Worcester, Mass.

**Guards, Railroad Cattle—**  
 Sheffield Car Co., Three Rivers, Mich.

#### **Guards, Razor—**

L. T. Weiss, Brooklyn, N. Y.

#### **Guards, Saw—**

E. C. Atkins & Co., Indianapolis, Ind.  
 Badger State Machine Co., Janesville, Wis.

#### **Guards, Skylight—**

(See Screens, Skylight Guard.)

#### **Guards, Snow and Ice—**

Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.  
 Forest City Steel & Iron Co., Cleveland, O.  
 Parker Wire Goods Co., Worcester, Mass.  
 Spencer Wire Co., Worcester, Mass.

#### **Guards, Spark—**

(See Grates, Grate.)

#### **Guards, Tree—**

Anchor Post Iron Works, 27 Cortlandt St., New York.  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Buffalo Wire Works Co., Buffalo, N. Y.  
 Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.  
 De Kalb Fence Co., De Kalb, Ill.  
 Dufur & Co., Baltimore, Md.  
 Estey Wire Works Co., 59 Fulton St., New York.  
 Forest City Steel & Iron Co., Cleveland, O.  
 Glen Mfg. Co., Ellwood City, Pa.  
 Howard & Morse, 45 Fulton St., N. Y.  
 Ludlow-Saylor Wire Co., St. Louis, Mo.  
 Fred J. Meyers Mfg. Co., Hamilton, O.  
 Nimmo Fence & Wire Works Co., Norwood, O.  
 Spencer Wire Co., Worcester, Mass.  
 Standard Wire Co., New Castle, Pa.  
 Stewart Iron Works Co., Cincinnati, O.  
 Van Dorn Iron Works Co., Cleveland, O.  
 Wright Wire Co., Worcester, Mass.

#### **Guards, Trouser—**

Arcade Mfg. Co., Freeport, Ill.  
 Bevin Bros. Mfg. Co., Easthampton, Ct.

#### **Guards, Window, Iron—**

(See Iron, Brass and Bronze, Ornamental.)

#### **Guards, Window, Wire—**

Anchor Post Iron Works, 27 Cortlandt St., New York.  
 Andrews Wire & Iron Works, Rockford, Ill.  
 Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.  
 Buffalo Wire Works Co., Buffalo, N. Y.

Clinton Wire Cloth Co., Clinton, Mass.  
 Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

Enterprise Foundry & Fence Co., Indianapolis, Ind.

Estey Wire Works Co., 59 Fulton St., New York.

Forest City Steel & Iron Co., Cleveland, O.

Gilbert & Bennett Mfg. Co., 27 Broadway, New York.

Glen Mfg. Co., Ellwood City, Pa.

Howard & Morse, 45 Fulton St., N. Y.

Ludlow-Saylor Wire Co., St. Louis, Mo.

Fred J. Meyers Mfg. Co., Hamilton, O.

Michigan Wire Cloth Co., Detroit, Mich.

Nimmo Fence & Wire Works Co., Norwood, O.

J. W. Paxson Co., Philadelphia, Pa.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

Stewart Iron Works Co., Cincinnati, O.

W. S. Tyler Co., Cleveland, O.

Van Dorn Iron Works Co., Cleveland, O.

Wright Wire Co., Worcester, Mass.

#### **Guides, Band Saw—**

E. C. Atkins & Co., Indianapolis, Ind.  
 Henry Disston & Sons, Philadelphia, Pa.

Simonds Mfg. Co., Fitchburg, Mass.

#### **Guides, Draw Shave—**

Goodell-Pratt Co., Greenfield, Mass.

#### **Guides, Fishing Rod—**

Horton Mfg. Co., Bristol, Ct.

#### **Guides, Lathe, Steel—**

J. L. Osgood, Buffalo, N. Y.

#### **Guides, Sheet and Rope—**

W. & J. Tiebout, 118 Chambers St., N. Y.

#### **Gummer Cutters—**

(See Cutters, Gummer.)

#### **Gummers, Saw—**

E. C. Atkins & Co., Indianapolis, Ind.

Henry Disston & Sons, Philadelphia, Pa.

Simonds Mfg. Co., Fitchburg, Mass.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

#### **Gun Carriages, Forgings—**

(See Carriages, Forgings.)

#### **Gun Implements—**

Ideal Mfg. Co., New Haven, Ct.

Union Hardware Co., Torrington, Ct.

Waterbury Brass Co., Waterbury, Ct.

#### **Gun Machinery—**

Detrick & Harvey Machine Co., Baltimore, Md.

Garvin Machine Co., Spring & Varick Sts., New York.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Pratt & Whitney Co., Hartford, Ct.

#### **Gun Wads—**

(See Wads, Gun.)

#### **Guns, Automatic Machine—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Colt's Patent Fire Arms Mfg. Co., Hartford, Ct.

#### **Guns, Gatling—**

Colt's Patent Fire Arms Mfg. Co., Hartford, Ct.

#### **Guns, Insect Powder—**

Goodell Co., Antrim, N. H.

#### **Guns, Saluting—**

Barney & Berry, Springfield, Mass.

**Guns, Shot—**  
Marlin Fire Arms Co., New Haven, Ct.  
Remington Arms Co., 313 Broadway, N. Y.  
J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

**Gutters—**  
(See Eave Troughs and Gutters.)

**Gutters in Rolls—**  
(See Valleys and Gutters in Rolls.)

**Guy Strand, Galvanized Wire—**  
(See Galvanized Wire, Guy Strand.)

**Guy Strand Wire—**  
(See Wire Strand Guya, Galvanized.)

**Hack Saws, Blades and Frames—**  
(See Saws, Hack, Blades and Frames.)

**Hack Saws, Power—**  
(See Saws, Power, Hack.)

**Hafts, Awl—**  
(See Handles, Chisels, File, Awl, &c.)

**Hair Brushes—**  
(See Brushes, Silver Plated.)

**Hair, Curled—**  
Baeder, Adamson & Co., 210 Chestnut St., Philadelphia, Pa.

**Hair Felting—**  
(See Felting, Hair.)

**Hairpin Wire—**  
(See Wire, Hairpin.)

**Half Hatchets—**  
(See Hatchets, Shingling, Half, &c.)

**Halter Chains, &c.—**  
(See Chains, Dog and Halter.)

**Halters—**  
Covert Mfg. Co., Troy, N. Y.  
Graton & Knight Mfg. Co., Worcester, Mass.

**Hammer Handles—**  
(See Handles, Hammer.)

**Hammer Wedges—**  
(See Wedges, Hammer and Hatchet.)

**Hammers, Air—**  
(See Hammers, Pneumatic.)

**Hammers, Air Cushioned Trip—**  
(See Hammers, Trip.)

**Hammers, Beading, Pneumatic—**  
Helwig Mfg. Co., St. Paul, Minn.

**Hammers, Belt Driven—**  
Beaudry & Co., Boston, Mass.  
C. C. Bradley & Son, Syracuse, N. Y.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Scranton & Co., New Haven, Ct.

**Hammers, Bill Posters', Long Handle—**  
Kilborn & Bishop Co., New Haven, Ct.  
Arthur H. Robertson, Boston, Mass.

**Hammers, Blacksmiths' Hand—**  
Billings & Spencer Co., Hartford, Ct.  
Heller Bros. Co., Newark, N. J.  
Hubbard & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Hammers, Boilermakers'—**  
Billings & Spencer Co., Hartford, Ct.  
Ingersoll-Rand Co., 11 Broadway, New York.

**Hammers, Boilermakers' Pneumatic—**  
Helwig Mfg. Co., St. Paul, Minn.

**Hammers, Brass—**  
Goodell-Pratt Co., Greenfield, Mass.

**Hammers, Brick—**  
L. & I. J. White Co., Buffalo, N. Y.

**Hammers, Bronze—**  
Phosphor Bronze Smelting Co., Ltd., 230 Washington Ave., Philadelphia.

**Hammers, Carriage Irons—**  
Heller Bros. Co., Newark, N. J.

**Hammers, Cast Iron Claw—**  
Arcade Mfg. Co., Freeport, Ill.  
Columbia Grey Iron Co., Columbia, Pa.

**Hammers, Chipping—**  
E. W. Bliss Co., Brooklyn, N. Y.  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
Helwig Mfg. Co., St. Paul, Minn.  
Ingersoll-Rand Co., 11 Broadway, New York.  
Pittsburgh Pneumatic Co., Canton, O.  
Whitman & Barnes Mfg. Co., Chicago, Ill.

**Hammers, Chipping and Calking, Pneumatic—**  
E. W. Bliss Co., Brooklyn, N. Y.  
Helwig Mfg. Co., St. Paul, Minn.

**Hammers, Combination—**  
Ulrich Mfg. Co., Rock Falls, Ill.

**Hammers, Copper—**  
U. S. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.  
Merchant & Evans Co., Philadelphia, Pa.  
New York Washer & Gasket Co., Brooklyn, N. Y.  
U. S. Indestructible Gasket Co., 50 Church St., New York.

**Hammers, Drop—**  
Alliance Machine Co., Alliance, O.  
American Tube & Stamping Co., Bridgeport, Ct.  
Billings & Spencer Co., Hartford, Ct.  
Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Chambersburg Engineering Co., Chambersburg, Pa.  
Ferracute Machine Co., Bridgeton, N. J.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
Chas. Leffler & Co., Brooklyn, N. Y.  
Long & Allstatter Co., Hamilton, O.  
Merrill Bros., Maspeth, N. Y.  
Miner & Peck Mfg. Co., New Haven, Ct.  
Morgan Engineering Co., Alliance, O.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
George A. Ohl & Co., Newark, N. J.  
Fred J. Swaine Co., St. Louis, Mo.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
Williams, White & Co., Moline, Ill.  
Zeh & Hahnemann Co., Newark, N. J.

**MERCHANTS.**  
Hill, Clarke & Co., Boston, Mass.  
Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Marshall & Huschart Machinery Co., 62-64 So. Canal St., Chicago, Ill.

Edgar M. Moore & Co., Pittsburgh, Pa.  
Motch & Merryweather Machinery Co.,  
Cleveland, O.

Wm. S. Nicholls, 253 Broadway, N. Y.  
Frentiss Tool & Supply Co., 115 Liberty  
St., New York.

Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and  
Wayman Sts., Chicago, Ill.

Vandyck-Churchill Co., 8 Dey St., N. Y.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit,  
Mich.

**Hammers. Drop. for Metal**

**Ceilings, &c.—**

E. W. Bliss Co., Brooklyn, N. Y.

Chambersburg Engineering Co., Chambers-  
burg, Pa.

Ferracute Machine Co., Bridgeton, N. J.

Merrill Bros., Maspeth, N. Y.

Morgan Engineering Co., Alliance, O.

**Hammers. Electric Chip-**

**ping—**

Stow Flexible Shaft Co., 26th and Callow-  
hill Sts., Philadelphia, Pa.

**Hammers. Farriers'—**

Heller Bros. Co., Newark, N. J.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Susquehanna Casting Co., Wrightsville,  
Pa.

**Hammers. Foot Power—**

Arcade Mfg. Co., Freeport, Ill.

Falls River & Machine Co., Cuyahoga  
Falls, O.

**Hammers. Granite Work-**

**ers'—**

Trow & Holden, Barre, Vt.

**Hammers. Hand Drilling—**

Hubbard & Co., Pittsburgh, Pa.

**Hammers. Heavy—**

(See Sledges and Hammers.)

**Hammers. Helve, Cushion—**

C. C. Bradley & Son, Syracuse, N. Y.

Long & Allstatter Co., Hamilton, O.

**Hammers. Helve, Spring—**

Wm. S. Nicholls, 253 Broadway, N. Y.

Novelty Iron Works, Dubuque, Ia.

Turner, Vaughn & Taylor Co., Cuyahoga  
Falls, O.

**Hammers. Lead and Alloy—**

New York Washer & Gasket Co., Brook-  
lyn, N. Y.

U. S. Indestructible Gasket Co., 50  
Church St., New York.

**Hammers. Machinists'—**

Billings & Spencer Co., Hartford, Ct.

Heller Bros. Co., Newark, N. J.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Susquehanna Casting Co., Wrightsville,  
Pa.

Whitman & Barnes Mfg. Co., Chicago,  
Ill.

**Hammers. Magnetic—**

Arcade Mfg. Co., Freeport, Ill.

Billings & Spencer Co., Hartford, Ct.

Kilborn & Bishop Co., New Haven, Ct.

Landers, Frary & Clark, New Britain, Ct.

Arthur R. Robertson, Boston, Mass.

Stanley Rule & Level Co., New Brit-  
ain, Ct.

Stow Flexible Shaft Co., 26th and Callow-  
hill Sts., Philadelphia, Pa.

Taplin Mfg. Co., New Britain, Ct.

**Hammers. Masons'—**

Hubbard & Co., Pittsburgh, Pa.

**Hammers. Meat—**

(See Pounders, Steak.)

**Hammers. Nail—**

Columbia Grey Iron Co., Columbia, Pa.

Kilborn & Bishop Co., New Haven, Ct.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Susquehanna Casting Co., Wrightsville,  
Pa.

Whitman & Barnes Mfg. Co., Chicago,  
Ill.

Wrightsville Hardware Co., Wrightsville,  
Pa.

**Hammers. Napping—**

Hubbard & Co., Pittsburgh, Pa.

**Hammers. Paving—**

E. C. Atkins & Co., Indianapolis, Ind.

Susquehanna Casting Co., Wrightsville,  
Pa.

L. & I. J. White Co., Buffalo, N. Y.

**Hammers. Planishing—**

Morgan Engineering Co., Alliance, O.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

**Hammers. Pneumatic—**

E. W. Bliss Co., Brooklyn, N. Y.

Chicago Pneumatic Tool Co., Fisher  
Bldg., Chicago, Ill.

Clayton Air Compressor Works, 114-118  
Liberty St., New York.

Helwig Mfg. Co., St. Paul, Minn.

Ingersoll-Rand Co., 11 Broadway, New  
York.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Pittsburgh Pneumatic Co., Canton, O.

**Hammers. Power—**

Beaudry & Co., Boston, Mass.

C. C. Bradley & Son, Syracuse, N. Y.

Dienelt & Eisenhardt, Inc., 1308 Howard  
St., Philadelphia, Pa.

R. E. Kidder, Worcester, Mass.

Long & Allstatter Co., Hamilton, O.

Merrill Bros., Maspeth, N. Y.

Morgan Engineering Co., Alliance, O.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Novelty Iron Works, Dubuque, Ia.

Scranton & Co., New Haven, Ct.

Taylor Machinery Co., Boston, Mass.

Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

Williams, White & Co., Moline, Ill.

Zeh & Hahnemann Co., Newark, N. J.

**MERCHANTS**

W. R. Beatty Machinery & Equipment  
Co., Pittsburgh, Pa.

Hill, Clarke & Co., Boston, Mass.

Cal. Hirsch & Sons Iron & Rail Co., St.  
Louis, Mo.

Manning, Maxwell & Moore, Inc., 85-89  
Liberty St., New York.

Marshall & Hushart Machinery Co., 63-  
64 So. Canal St., Chicago, Ill.

Edgar M. Moore & Co., Pittsburgh, Pa.

Motch & Merryweather Machinery Co.,  
Cleveland, O.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

F. P. Schlelein Machinery Co., Pittsburgh, Pa.

Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

L. F. Seyfert's Sons, Inc., 437-441 N. 3d St., Philadelphia, Pa.

Vandeyck-Churchill Co., 8 Dey St., N. Y.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

**Hammers, Prospecting—**  
Susquehanna Casting Co., Wrightsville, Pa.

**Hammers, Raising—**  
Niagara Machine & Tool Works, Buffalo, N. Y.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Hammers, Riveting—**  
Billings & Spencer Co., Hartford, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Helwig Mfg. Co., St. Paul, Minn.

Ingersoll-Rand Co., 11 Broadway, N. Y.

Niagara Machine & Tool Works, Buffalo, N. Y.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Pittsburgh Pneumatic Co., Canton, O.

Susquehanna Casting Co., Wrightsville, Pa.

**Hammers, Riveting, Pneumatic—**  
Helwig Mfg. Co., St. Paul, Minn.

**Hammers, Rotary Riveting—**  
F. B. Shuster & Co., New Haven, Ct.

Williams, White & Co., Moline, Ill.

**Hammers, Saddlers' and Upholsterers—**  
Arcade Mfg. Co., Freeport, Ill.

Columbia Grey Iron Co., Columbia, Pa.

Kilborn & Bishop Co., New Haven, Ct.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Hammers, Scaling, Pneumatic—**  
Helwig Mfg. Co., St. Paul, Minn.

**Hammers, Setting—**  
Niagara Machine & Tool Works, Buffalo, N. Y.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Hammers, Shoe—**  
Elmore Tool Mfg. Co., Hartford, Ct.

Heath Foundry & Mfg. Co., Plymouth, O.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Louis Sacks, Newark, N. J.

Susquehanna Casting Co., Wrightsville, Pa.

Wrightsville Hardware Co., Wrightsville, Pa.

**Hammers, Slaters—**  
Susquehanna Casting Co., Wrightsville, Pa.

**Hammers, Sorting—**  
Hubbard & Co., Pittsburgh, Pa.

**Hammers, Spalling—**  
Hubbard & Co., Pittsburgh, Pa.

**Hammers, Steak—**  
(See Pounders, Steak.)

**Hammers, Steam—**  
Alliance Machine Co., Alliance, O.

Beaudry & Co., Inc., Boston, Mass.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Buffalo Foundry & Machine Co., Buffalo, N. Y.

Chambersburg Engineering Co., Chambersburg, Pa.

Richard Dudgeon, 24 Columbia St., N. Y.

Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.

McBougall & Potter Co., 602-612 W. 55th St., New York.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Engineering Co., Alliance, O.

Niles-Bement-Pond Co., 111 Broadway, Taylor Machinery Co., Boston, Mass.

**MERCHANTS.**  
Baird Machinery Co., Pittsburgh, Pa.

W. R. Beatty Machinery & Equipment Co., Pittsburgh, Pa.

Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.

Barclay M. Everson, Pittsburgh, Pa.

Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Marshall & Hushart Machinery Co., 62 S. Canal St., Chicago, Ill.

Edgar M. Moore & Co., Pittsburgh, Pa.

Motch & Merryweather Machinery Co., Cleveland, O.

F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., 63 N. Halsted St., Chicago, Ill.

L. F. Seyfert's Sons, Inc., 437-441 No. 3d St., Philadelphia, Pa.

Vandeyck-Churchill Co., 8 Dey St., N. Y.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

**Hammers, Steam Drop—**  
Alliance Machine Co., Alliance, O.

Bethlehem Steel Co., So. Bethlehem, Pa.

Chambersburg Engineering Co., Chambersburg, Pa.

Taylor Machinery Co., Boston, Mass.

**Hammers, Steam Helve—**  
Charles F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.

Morgan Engineering Co., Alliance, O.

**Hammers, Stone—**  
(See Sledges and Hammers.)

**Hammers, Stone Cutters—**  
E. W. Bliss Co., Brooklyn, N. Y.

Ingersoll-Rand Co., 11 Broadway, New York.

**Hammers, Stone, Pneumatic—**  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

**Hammers, Striking—**  
Hubbard & Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Hammers, Tack—**

Arcade Mfg. Co., Freeport, Ill.  
 Billings & Spencer Co., Hartford, Ct.  
 Columbia Grey Iron Co., Columbia, Pa.  
 Kilborn & Bishop Co., New Haven, Ct.  
 Landers, Frary & Clark, New Britain, Ct.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.  
 Arthur R. Robertson, Boston, Mass.  
 Stanley Rule & Level Co., New Britain, Ct.  
 Susquehanna Casting Co., Wrightsville, Pa.

**Hammers, Tinnerns'—**

C. S. Mersick & Co., New Haven, Ct.  
 Niagara Machine & Tool Works, Buffalo, N. Y.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Hammers, Tire Welding—**

Williams, White & Co., Moline, Ill.

**Hammers, Trip—**

Beaudry & Co., Boston, Mass.  
 Merrill Bros., Brooklyn, N. Y.  
 Scranton & Co., New Haven, Ct.

**Hammers, Turning—**

Billings & Spencer Co., Hartford, Ct.  
 Heller Bros. Co., Newark, N. J.  
 Susquehanna Casting Co., Wrightsville, Pa.

**Hammers, Upholsterers'—**

(See Hammers, Saddlers' and Upholsterers.)

**Hammers, Vacuum—**

Williams, White & Co., Moline, Ill.

**Hammock Cords, Hooks, &c.—**

(See Cords, Hooks, &c.)

**Hammock Trapeze Bars—**

(See Supports and Bars, Hammock.)

**Hammocks—**

I. E. Palmer Co., Middletown, Ct.

**Hand Bells, &c.—**

(See Bells, &c.)

**Hand Carts—**

(See Carts, Push.)

**Hand Hoist Carriers—**

(See Carriers, Hand Hoist.)

**Hand Hole Punches—**

(See Punches, Hand and Tube Hole.)

**Hand Rail Brackets, Screws—**

(See Brackets, Screws.)

**Hand Screws, Vises—**

(See Screws, Vises.)

**Handle Bars—**

(See Bicycle Parts.)

**Handles and Heads, Brace Bit—**

Piqua Handle & Mfg. Co., Piqua, O.

H. A. Stiles & Co., Boston, Mass.

**Handles and Locks, Store Door—**

Eagle Lock Co., Terryville, Ct.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Handles, Ash Can—**

(See Tinnerns' Trimmings.)

**Handles, Auger—**

W. R. Hartigan, Collinsville, Ct.  
 Irwin Auger Bit Co., Wilmington, O.  
 Millers Falls Co., 23 Warren St., N. Y.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.

Piqua Handle & Mfg. Co., Piqua, O.

James Swan Co., Seymour, Ct.

**Handles, Auger Bit—**

James Swan Co., Seymour, Ct.

**Handles, Awl—**

(See Handles, Chisel, File, Awl, &c.)

**Handles, Axe, Pick, Sledge, &c.—**

Wm. R. Hartigan, Collinsville, Ct.

Hartwell Bros., Inc., Chicago Heights, Ill.

**Handles, Bag, Box, &c.—**

R. C. Jenkinson & Co., Newark, N. J.

**Handles, Balance—**

J. H. Williams & Co., Brooklyn, N. Y.

**Handles, Barrel, Steel—**

W. J. Clark Co., Salem, O.

**Handles, Basket, Wire—**

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

E. H. Titchener & Co., Binghamton, N. Y.

**Handles, Boiler—**

(See Tinnerns' Trimmings.)

**Handles, Broom—**

American Fork & Hoe Co., Cleveland, O.

Piqua Handle & Mfg. Co., Piqua, O.

**Handles, Brush, Duster, &c.—**

W. R. Hartigan, Collinsville, Ct.

Piqua Handle & Mfg. Co., Piqua, O.

**Handles, Can—**

Otto Konigsloew Mfg. Co., Cleveland, O.

**Handles, Carriage Door—**

Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

**Handles, Carving Tool—**

Chapin-Stephens Co., Pine Meadow, Ct.

Piqua Handle & Mfg. Co., Piqua, O.

H. A. Stiles & Co., Boston, Mass.

**Handles, Chest, Shutter, &c.—**

Ney Mfg. Co., Canton, O.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Stanley Works, New Britain, Ct.

Susquehanna Casting Co., Wrightsville, Pa.

Taylor & Boggis Foundry Co., Cleveland, W. & J. Tiebout, 118 Chambers St., N. Y.

Wrightsville Hardware Co., Wrightsville, Pa.

**Handles, Chisel, File, Awl, &c.—**

American File Sharpener Co., 286 Broadway, New York.

Baker, McMillen Co., Akron, O.

Buck Bros., Millbury, Mass.

Chapin-Stephens Co., Pine Meadow, Ct.

W. R. Hartigan, Collinsville, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Nicholson File Co., Providence, R. I.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Piqua Handle & Mfg. Co., Piqua, O.

Stanley Rule & Level Co., New Britain, Ct.

H. A. Stiles & Co., Boston, Mass.

James Swan Co., Seymour, Ct.

Union Hardware Co., Torrington, Ct.

**Handles, Chisel, Leather Head—**

C. E. Jennings & Co., 42 Murray St., New York.

**Piqua Handle & Mfg. Co., Piqua, O. Handles, Cloth and Skirt Knife—**

W. H. Compton Shear Co., Newark, N. J.

**Handles, Cork Screw—**

W. R. Hartigan, Collinsville, Ct.

H. A. Stiles & Co., Boston, Mass.

**Handles, Corn Knife—**

Baker, McMillen Co., Akron, O.

**Handles, Corn Popper—**

(See Handles, Grass Hook, &c.)

**Handles, Crank—**

J. H. Williams & Co., Brooklyn, N. Y.

**Handles, Cresscent Saw—**

E. C. Atkins & Co., Indianapolis, Ind.

George H. Bishop & Co., Cincinnati, O.

Henry Diston & Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.

Piqua Handle & Mfg. Co., Piqua, O.

Simonds Mfg. Co., Fitchburg, Mass.

**Handles, Curry Comb—**

Baker, McMillen Co., Akron, O.

W. R. Hartigan, Collinsville, Ct.

Piqua Handle & Mfg. Co., Piqua, O.

H. A. Stiles & Co., Boston, Mass.

**Handles, Cutlery—**

H. A. Stiles & Co., Boston, Mass.

**Handles, Dampier—**

Baker, McMillen Co., Akron, O.

**Handles, Detachable Tool—**

Millers Falls Co., 23 Warren St., N. Y.

Nicholson File Co., Providence, E. I.

**Handles, Die Stock Tubular—**

Standard Welding Co., Cleveland, O.

**Handles, Door—**

Columbia Grey Iron Co., Columbia, Pa.

H. B. Ives Co., New Haven, Ct.

Lawrence Bros., Sterling, Ill.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Stanley Works, New Britain, Ct.

Taylor & Boggis Foundry Co., Cleveland.

Wrightsville Hardware Co., Wrightsville, Pa.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Handles, Door Bell—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Handles, Drawer—**

Otto Konigslow Mfg. Co., Cleveland, O.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Handles, Electric Switch—**

W. R. Hartigan, Collinsville, Ct.

H. A. Stiles & Co., Boston, Mass.

**Handles, Enameled and Plain—**

Baker, McMillen Co., Akron, O.

W. R. Hartigan, Collinsville, Ct.

H. A. Stiles & Co., Boston, Mass.

**Handles, File and Tool, Indestructible—**

J. L. Osgood, Buffalo, N. Y.

**Handles, Floral Set—**

Piqua Handle & Mfg. Co., Piqua, O.

**Handles, Fork, Spade, Shovel, Scoop, Hoe, Rake, &c.—**

American Fork & Hoe Co., Cleveland, O.

Avery Stamping Co., Cleveland, O.

Piqua Handle & Mfg. Co., Piqua, O.

**Handles, Gas Taper Lighter—**

Piqua Handle & Mfg. Co., Piqua, O.

**Handles, Gimlet—**

W. R. Hartigan, Collinsville, Ct.

H. A. Stiles & Co., Boston, Mass.

**Handles, Grass Hook, Hedge Shear, Ice Pick, Cleaver, Crank, Corn Knife, Corn Popper, Trowel, &c.—**

Piqua Handle & Mfg. Co., Piqua, O.

H. A. Stiles & Co., Boston, Mass.

**Handles, Guard—**

(See Tinners' Trimmings.)

**Handles, Hammer and Hatchet—**

W. R. Hartigan, Collinsville, Ct.

Hartwell Bros., Inc., Chicago Heights, Ill.

Piqua Handle & Mfg. Co., Piqua, O.

**Handles, Hand Saw—**

(See Handles, Plane and Saw.)

**Handles, Ice and Cant Hook—**

Piqua Handle & Mfg. Co., Piqua, O.

**Handles, Ice Chisel, Shave, Spoon—**

W. R. Hartigan, Collinsville, Ct.

Piqua Handle & Mfg. Co., Piqua, O.

**Handles, Incandescent Lamp Guard—**

H. A. Stiles & Co., Boston, Mass.

**Handles, Knife, Wrench, &c.—**

W. R. Hartigan, Collinsville, Ct.

Piqua Handle & Mfg. Co., Piqua, O.

H. A. Stiles & Co., Boston, Mass.

**Handles, Ladle—**

Baker, McMillen Co., Akron, O.

**Handles, Lawn Mower—**

Wm. R. Hartigan, Collinsville, Ct.

Piqua Handle & Mfg. Co., Piqua, O.

**Handles, Lifting—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

**Handles, Machine—**

Billings & Spencer Co., Hartford, Ct.

W. J. Clark Co., Salem, O.

Keystone Drop Forge Works, Chester, Pa.

Kilborn & Bishop Co., New Haven, Ct.

Richmond Forgings Corporation, Richmond, Va.

Transue & Williams Co., Alliance, O.

Whitman & Barnes Mfg. Co., Chicago.

J. H. Williams & Co., Brooklyn, N. Y.

**Handles, Package and Pail—**

H. A. Stiles & Co., Boston, Mass.

**Handles, Plane and Saw—**

E. C. Atkins & Co., Indianapolis, Ind.

Geo. H. Bishop & Co., Cincinnati, O.

Chapin-Stephens Co., Pine Meadow, Ct.

Henry Diston & Sons, Philadelphia, Pa.

C. E. Jennings & Co., 42 Murray St., New York.

National Saw Co., Newark, N. J.

Simonds Mfg. Co., Fitchburg, Mass.

**Handles, Plate—**

(See Kitchen Articles, Wire.)

**Handles, Putty Knife—**

W. R. Hartigan, Collinsville, Ct.

**Handles, Rice Boiler—**

Baker, McMillen Co., Akron, O.

**Handles, Rubber Stamp—**

Baker, McMillen Co., Akron, O.

W. R. Hartigan, Collinsville, Ct.

**Handles, Sad Iron—**

Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

W. R. Hartigan, Collinsville, Ct.

Piqua Handle &amp; Mfg. Co., Piqua, O.

H. A. Stiles &amp; Co., Boston, Mass.

**Handles, Screw Driver—**

Baker, McMillen Co., Akron, O.

Chapin-Stephens Co., Pine Meadow, Ct.

W. R. Hartigan, Collinsville, Ct.

Piqua Handle &amp; Mfg. Co., Piqua, O.

H. A. Stiles &amp; Co., Boston, Mass.

**Handles, Screw Plate—**

Standard Welding Co., Cleveland, O.

**Handles, Skirt Knife—**

(See Handles, Cloth and Skirt Knife.)

**Handles, Soldering Copper—**

Baker, McMillen Co., Akron, O.

Piqua Handle &amp; Mfg. Co., Piqua, O.

H. A. Stiles &amp; Co., Boston, Mass.

**Handles, Steam Valve—**

(See Wheels, Steam Valve.)

**Handles, Store Door—**

(See Handles and Locks, Store Door.)

**Handles, Tack Puller—**

W. R. Hartigan, Collinsville, Ct.

Piqua Handle &amp; Mfg. Co., Piqua, O.

H. A. Stiles &amp; Co., Boston, Mass.

**Handles, Tea and Coffee Pot—**

Baker, McMillen Co., Akron, O.

H. A. Stiles &amp; Co., Boston, Mass.

**Handles, Telegraph Shovel**

Piqua Handle &amp; Mfg. Co., Piqua, O.

**Handles, Toy Garden Set—**

Piqua Handle &amp; Mfg. Co., Piqua, O.

**Handles, Trowel—**

E. C. Atkins &amp; Co., Indianapolis, Ind.

H. A. Stiles &amp; Co., Boston, Mass.

**Handles, Trunk—**

Graton &amp; Knight Mfg. Co., Worcester, Mass.

**Handles, Tub—**

Morgan Spring Co., Worcester, Mass.

Reading Hardware Co., Reading, Pa.

Russell &amp; Erwin Mfg. Co., 94-98 Lafayette

St., New York.

Stanley Works, New Britain, Ct.

H. A. Stiles &amp; Co., Boston, Mass.

**Handles, Wall Scraper—**

H. A. Stiles &amp; Co., Boston, Mass.

**Handles, Whisk Broom—**

Baker, McMillen Co., Akron, O.

**Handles, Wire, Basket—**

Spencer Wire Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Handles, Wrench—**

(See Handles, Knife, Wrench.)

**Hanger Equipments, Closet—**

Wire Goods Co., Worcester, Mass.

**Hanger Rails—**

(See Hangers, Pipe.)

**Hanger Screws—**

(See Screws, Hanger.)

**Hangers, Accordion or Folding Door—**

McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.

Richards Mfg. Co., Aurora, Ill.

Safety Door Hanger Co., Ashland, O.

**Hangers and Rails, Suspended—**

(See Rails and Hangers, Suspended.)

**Hangers and Stirrups, Joist****and Timber—**

Belmont Iron Works, Inc., Philadelphia.

Bethlehem Foundry &amp; Machine Co.,

South Bethlehem, Pa.

Chattanooga Roofing &amp; Foundry Co.,

Chattanooga, Tenn.

W. J. Clark Co., Salem, O.

Lane Bros. Co., Poughkeepsie, N. Y.

National Iron &amp; Wire Co., Cleveland, O.

Philadelphia Steel &amp; Wire Co., 525 Commerce St., Philadelphia, Pa.

Safety Door Hanger Co., Ashland, O.

Steward &amp; Romaine Mfg. Co., Philadelphia, Pa.

Van Dorn Iron Works Co., Cleveland, O.

**Hangers, Arc Lamp—**

National Sewing Machine Co., Belvidere,

Ill.

**Hangers, Auditorium Door—**

(See Hangers, Accordion.)

**Hangers, Barn Door—**

Chicago Spring Butt Co., Chicago, Ill.

Crunk &amp; Carrier Mfg. Co., Elmira, N. Y.

Griffin Mfg. Co., Erie, Pa.

Lane Bros. Co., Poughkeepsie, N. Y.

Lawrence Bros., Sterling, Ill.

Louden Machinery Co., Fairfield, Ia.

McCabe Hanger Mfg. Co., 425-427 W. 25th

St., New York.

McKinney Mfg. Co., Allegheny, Pa.

S. B. Martin, Dalton, O.

F. E. Myers &amp; Bro., Ashland, O.

National Mfg. Co., Sterling, Ill.

Ney Mfg. Co., Canton, O.

Reading Hardware Co., Reading, Pa.

Richards Mfg. Co., Aurora, Ill.

Safety Door Hanger Co., Ashland, O.

Taylor &amp; Boggis Foundry Co., Cleveland.

**Hangers, Barn Door,****Hinged—**

Crunk &amp; Carrier Mfg. Co., Elmira, N. Y.

Griffin Mfg. Co., Erie, Pa.

Lane Bros. Co., Poughkeepsie, N. Y.

Lawrence Bros., Sterling, Ill.

Louden Machinery Co., Fairfield, Ia.

McKinney Mfg. Co., Allegheny, Pa.

S. B. Martin, Dalton, O.

F. E. Myers &amp; Bro., Ashland, O.

National Mfg. Co., Sterling, Ill.

Ney Mfg. Co., Canton, O.

Richards Mfg. Co., Aurora, Ill.

Safety Door Hanger Co., Ashland, O.

**Hangers, Boiler—**

Joseph T. Ryerson &amp; Son, 18-22 Mil-

waukee Ave., Chicago, Ill.

Scully Steel &amp; Iron Co., Halsted and

Wayman Sts., Chicago, Ill.

**Hangers, Cable—**

Star Expansion Bolt Co., 147-149 Cedar

St., New York.

**Hangers, Car Door—**

Chisholm &amp; Moore Mfg. Co., Cleve-

land, O.

McCabe Hanger Mfg. Co., 425-427 W. 25th

St., New York.

- Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.
- Safety Door Hanger Co., Ashland, O.
- Hangers, Closet and Cup-board Door—**  
Richards Mfg. Co., Aurora, Ill.
- Hangers, Cup and Saucer, Plate, &c.—**  
Wire Goods Co., Worcester, Mass.
- Hangers, Cycle—**  
(See Stands and Holders, Bicycle.)
- Hangers, Eave Trough—**  
Andrews Wire & Iron Works, Rockford, Ill.
- Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.
- Hangers, Elevator Door—**  
Chisholm & Moore Mfg. Co., Cleveland, O.
- McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.
- McKinney Mfg. Co., Allegheny, Pa.
- Reading Hardware Co., Reading, Pa.
- Richards Mfg. Co., Aurora, Ill.
- Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.
- Safety Door Hanger Co., Ashland, O.
- Hangers, Fire Door—**  
Griffin Mfg. Co., Erie, Pa.
- Lane Bros. Co., Poughkeepsie, N. Y.
- McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.
- F. E. Myers & Bro., Ashland, O.
- Richards Mfg. Co., Aurora, Ill.
- Safety Door Hanger Co., Ashland, O.
- Hangers, Folding Door—**  
(See Hangers, Accordion.)
- Hangers, Garment and Trousers—**  
Andrews Wire & Iron Works, Rockford, Ill.
- M. S. Brooks & Sons, Chester, Ct.
- Caldwell Mfg. Co., Rochester, N. Y.
- Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.
- Dufur & Co., Baltimore, Md.
- Kilbourne Mfg. Co., Troy, N. Y.
- Parker Wire Goods Co., Worcester, Mass.
- Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.
- Standard Wire Co., New Castle, Pa.
- Taplin Mfg. Co., New Britain, Ct.
- Wire Goods Co., Worcester, Mass.
- Wright Wire Co., Worcester, Mass.
- Hangers, Gate—**  
Griffin Mfg. Co., Erie, Pa.
- M. Lanz & Sons, Pittsburgh, Pa.
- F. E. Myers & Bro., Ashland, O.
- Safety Door Hanger Co., Ashland, O.
- Hangers, Gear Brake—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Hangers, House Door—**  
Arcade Mfg. Co., Freeport, Ill.
- Bridgeport Hardware Mfg. Co., Bridgeport, Ct.
- Lane Bros. Co., Poughkeepsie, N. Y.
- Lawrence Bros., Sterling, Ill.
- McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.
- McKinney Mfg. Co., Allegheny, Pa.
- F. E. Myers & Bro., Ashland, O.
- National Mfg. Co., Sterling, Ill.
- Richards Mfg. Co., Aurora, Ill.
- Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.
- Safety Door Hanger Co., Ashland, O.
- Hangers, Marlin—**  
(See Hangers, Cable.)
- Hangers, Messenger—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Hangers, Paint Pot—**  
Eyelet Tool Co., Boston, Mass.
- Hangers, Pipe—**  
Beaton & Bradley Co., New Britain, Ct.
- Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.
- Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.
- Jenkins Bros., 71 John St., New York.
- National Tube Co., Pittsburgh, Pa.
- Hangers, Post—**  
H. W. Caldwell & Son Co., Western Ave., 17th and 18th Sts., Chicago, Ill.
- Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.
- Falls Rivet & Machine Co., Cuyahoga Falls, O.
- Jones & Laughlin Steel Co., Pittsburgh
- Poole Engineering & Machine Co., Baltimore, Md.
- Hangers, Shaft—**  
American Tool & Machine Co., Boston.
- Bancroft & Co., Philadelphia, Pa.
- Brown & Sharpe Mfg. Co., Providence, R. I.
- H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.
- W. E. Caldwell Co., Louisville, Ky.
- Charter Gas Engine Co., Sterling, Ill.
- Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.
- W. P. Davis Machine Co., Rochester, N. Y.
- Dodge Mfg. Co., Mishawaka, Ind.
- Falls Rivet & Machine Co., Cuyahoga Falls, O.
- Hess-Snyder Co., Massillon, O.
- Humphrey Machine Co., Keene, N. H.
- Jones & Laughlin Steel Co., Pittsburgh
- W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.
- Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Poole Engineering & Machine Co., Baltimore, Md.
- Royersford Foundry & Machine Co., Royersford, Pa.
- T. B. Wood's Sons Co., Chambersburg, Pa.
- Hangers, Strap—**  
(See Hangers, Pipe.)
- Hangers, Swivel Door—**  
(See Hangers, Accordion.)
- Hangers, Trolley—**  
(See Hangers, Barn Door and House Door.)
- Hangers, Trolley Wire—**  
(See Trolley Materials, Electric.)
- Hangers, Warehouse Door—**  
Chisholm & Moore Mfg. Co., Cleveland.
- Griffin Mfg. Co., Erie, Pa.
- McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.
- S. B. Martin, Dalton, O.
- F. E. Myers & Bro., Ashland, O.
- Safety Door Hanger Co., Ashland, O.
- Hangers, Window Screen and Storm Sash—**  
National Mfg. Co., Sterling, Ill.



Phenix Mfg. Co., Milwaukee, Wis.  
Stanley Works, New Britain, Ct.

**Hardeners, Felt-**  
Farrel Foundry & Machine Co., Ansonia, Ct.

**Hardies, Anvil-**  
Heller Bros. Co., Newark, N. J.

**Hardware, Builders'-**  
(See Locks, Latches, &c.)

**Hardware, Carriage and Wagon-**  
(See Carriage and Wagon Hardware.)  
**Hardware Commission Merchants-**  
(See Agents.)

**Hardware, Fire Door-**  
(See Fixtures, Fire Door.)

**Hardware Jobbers-**  
(See Jobbers, Hardware, Cutlery, &c.)

**Hardware, Launch-**  
(See Launch, Hardware.)

**Hardware, Marine-**  
(See Marine Hardware.)

**Hardware Shelf Boxes-**  
(See Boxes, Shelf.)

**Hardware Specialties-**  
(See Metal Specialties to Order.)

**Hardware Store Shelving-**  
(See Shelving.)

**Hardware, Trunk and Bag-**  
(See Corners, Clamps, Locks, &c.)

**Harness Chains, Hooks, &c.-**  
(See Chains, Hooks, &c.)

**Harpoons-**  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Harrow Teeth-**  
(See Teeth.)

**Harrows-**  
Bateman Mfg. Co., Grenloch, N. J.

Hayes Pump & Planter Co., Galva, Ill.

Keystone Farm Machine Co., York, Pa.

Long & Allstatter Co., Hamilton, O.

Syracuse Chilled Plow Co., Syracuse, N. Y.

R. W. Whitehurst & Co., Norfolk, Va.

**Hasp, Latch and Stanle-**  
Cronk & Carrier Mfg. Co., Elmira, N. Y.

**Hasps and Staples-**  
(See Wrought Iron Goods.)

**Hasps, Cellar Door-**  
McKinney Mfg. Co., Allegheny, Pa.

**Hasps, Hinge-**  
Griffin Mfg. Co., Erie, Pa.

M. Lanz & Sons, Pittsburgh, Pa.

Lawrence Bros., Sterling, Ill.

McKinney Mfg. Co., Allegheny, Pa.

National Mfg. Co., Sterling, Ill.

Reading Hardware Co., Reading, Pa.

Stanley Works, New Britain, Ct.

**Hat Badges-**  
(See Badges and Medals.)

**Hatch Doors-**  
(See Doors, Automatic Hatch.)

**Hatchets, Combination-**  
Elmore Tool Mfg. Co., Hartford, Ct.

Kilborn & Bishop Co., New Haven, Ct.

**Hatchets, Confectioners'-**  
Wrightsville Hardware Co., Wrightsville, Pa.

**Hatchets, Hunters'-**  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Hatchets, Ice-**  
Wrightsville Hardware Co., Wrightsville, Pa.

**Hatchets, Rafting-**  
Columbia Grey Iron Co., Columbia, Pa.  
**Hatchets, Shingling, Half, &c.-**

Arcade Mfg. Co., Freeport, Ill.

Columbia Grey Iron Co., Columbia, Pa.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Susquehanna Casting Co., Wrightsville, Pa.

I. & I. J. White Co., Buffalo, N. Y.

Wrightsville Hardware Co., Wrightsville, Pa.

**Hatchets, Tobacco-**  
North Wayne Tool Co., Hollowell, Me.

**Haulage Plants-**  
Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Haulage, Wire Rope Under-**  
ground-

Wellman-Seaver-Morgan Co., Cleveland, O.

**Hauls, Log-**  
(See Log Hauls.)

**Hauls, Mine Car-**  
Interstate Engineering Co., Bedford, O.

Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Philadelphia, Pa.

**Hay Carrier Track-**  
(See Track, Overhead Carrying.)

**Hay Fork Carriers, Pul-**  
leys-

(See Haying Tools, Pulleys.)

**Hay Fork Fixtures-**  
F. E. Myers & Bro., Ashland, O.

Whitman & Barnes Mfg. Co., Chicago, Ill.

**Hay Forks-**  
(See Forks, Hay, Manure, Spading, &c.)

**Hay Knives, Rope-**  
(See Knives, Rope.)

**Hay Rack Fixtures-**  
(See Clamps, Hay Rack.)

**Hay Racks-**  
(See Stable Fixtures.)

**Haying Tools (Forks, Slings and Carriers)-**

Louden Machinery Co., Fairfield, Ia.

F. E. Myers & Bro., Ashland, O.

Nev Mfg. Co., Canton, O.

Syracuse Chilled Plow Co., Syracuse, N. Y.

Warsaw Elevator Co., Warsaw, N. Y.

Whitman & Barnes Mfg. Co., Chicago.

**Header and Bender, Bicycle Spoke-**  
(See Spoke Header and Bender, Bicycle.)

**Headers, Bolt-**  
Acme Machinery Co., Cleveland, O.

Ajax Mfg. Co., Cleveland, O.

Baird Machinery Co., Pittsburgh, Pa.

Blake & Johnson Co., Waterbury, Ct.

Asa S. Cook Co., Hartford, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

E. J. Manville Machine Co., Waterbury, Ct.

National Machinery Co., Tiffin, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

R. B. Noyes & Co., Greenfield, Mass.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Headers, Rivet-**  
Acme Machinery Co., Cleveland, O.

Ajax Mfg. Co., Cleveland, O.  
 Blake & Johnson Co., Waterbury, Ct.  
 Asa S. Cook, Hartford, Ct.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 E. J. Manville Machine Co., Waterbury, Ct.  
 National Machinery Co., Tiffin, O.  
 Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
**Headers, Rod—**  
 Blake & Johnson Co., Waterbury, Ct.  
 National Machinery Co., Tiffin, O.  
 Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
**Headers, Screw Blank—**  
 E. J. Manville Machine Co., Waterbury, Ct.  
**Headers, Tin Can—**  
 E. W. Bliss Co., Brooklyn, N. Y.  
**Headers, Wood Screw—**  
 Asa S. Cook Co., Hartford, Ct.  
**Heading and Shingle Machines—**  
 Peter Gerlach Co., Cleveland, O.  
 Lane Mfg. Co., Montpelier, Vt.  
 Novelty Iron Works, Dubuque, Ia.  
**Heading Machines, Bit—**  
 E. W. Bliss Co., Brooklyn, N. Y.  
**Headless Bolts—**  
 (See Bolts, Special.)  
**Headlight Parts—**  
 Clark Novelty Co., Rochester, N. Y.  
**Heads and Hooks, Coke—**  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Heads and Liners for Gyratory Crushers—**  
 Chrome Steel Works, Chrome, N. J.  
**Heads, Boiler—**  
 Bovaird & Co., Bradford, Pa.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.  
 Tudor Boiler Mfg. Co., Cincinnati, O.  
**Heads, Brace—**  
 (See Handles and Heads, Brace.)  
**Heads, Conductor—**  
 Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.  
 Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
**Heads, Exhaust—**  
 American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.  
 Boston Blowers Co., Hyde Park, Mass.  
 Burt Mfg. Co., Akron, O.  
 Exeter Machine Works, Exeter, N. H.  
 Benj. F. Kelley & Son, 91 Liberty St., New York.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Frank L. Patterson & Co., 26 Cortlandt St., New York.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
 Sterling Blower & Pipe Mfg. Co., Hartford, Ct.  
 B. F. Sturtevant Co., Boston, Mass.  
 Whitlock Coil Pipe Co., Hartford, Ct.  
**Heads, Flanged and Dished Boiler—**  
 Avery Stamping Co., Cleveland, O.  
 E. Keeler Co., Williamsport, Pa.  
 Lukens Iron & Steel Co., Coatesville, Pa.

Tudor Boiler Mfg. Co., Cincinnati, O.  
**Heads, Flanged, Barrel, Tank, &c.—**  
 W. J. Clark Co., Salem, O.  
**Heads, Indexing and Diving—**  
 Becker Milling Machine Co., Hyde Park, Mass.  
 Cincinnati Milling Machine Co., Cincinnati, O.  
 Garvin Machine Co., Spring and Varick Sts., New York.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Pratt & Whitney Co., Hartford, Ct.  
 Stockbridge Machine Co., Worcester, Mass.  
**Heads, Kitchen Boiler, &c.—**  
 Avery Stamping Co., Cleveland, O.  
**Heads, Planer—**  
 Tindel-Morris Co., Eddystone, Pa.  
**Heads, Polishing—**  
 Builders Iron Foundry, Providence, R. I.  
 Chandler & Farquhar Co., Boston, Mass.  
 Diamond Machine Co., Providence, R. I.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Hanson & Van Winkle Co., Newark, N.J.  
 Zucker & Levett & Loeb Co., 526 W. 25th St., New York.  
**Heads, Rose Sprinkler—**  
 Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.  
**Heads, Sheep Shearing—**  
 Coates Clipper Mfg. Co., Worcester, Mass.  
**Heads, Tank—**  
 Tudor Boiler Mfg. Co., Cincinnati, O.  
**Heads, Working, Deep Well Power—**  
 Deining Co., Salem, O.  
**Heads, Working Windmill, &c.—**  
 Barnes Mfg. Co., Mansfield, O.  
 Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
**Heaters, Asphalt and Mastic—**  
 F. H. Evans, Brooklyn, N. Y.  
**Heaters, Barrel—**  
 Warsaw Elevator Co., Warsaw, N. Y.  
**Heaters, Carriage—**  
 Chicago Flexible Shaft Co., 124 La Salle Ave., Chicago, Ill.  
**Heaters, Feed Water—**  
 Alberger Condenser Co., 95 Liberty St., New York.  
 American Spiral Pipe Works, 1173-1201 S. Paulina St., Chicago, Ill.  
 Exeter Machine Works, Exeter, N. Y.  
 S. Freeman & Sons Mfg. Co., Racine, Wis.  
 Green Fuel Economizer Co., Matteawan, N. Y.  
 Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
 Harrison Safety Boiler Works, 3194 N. 17th St., Philadelphia, Pa.  
 Hawley Down Draft Furnace Co., Chicago, Ill.  
 Benj. F. Kelley & Son, 91 Liberty St., New York.  
 Loew Mfg. Co., Cleveland, O.  
 John H. McGowan Co., Cincinnati, O.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

National Pipe Bending Co., New Haven, Ct.

Frank L. Patterson & Co., 28 Cortlandt St., New York.

Petroleum Iron Works Co., Sharon, Pa.

Wm. B. Seafie & Sons Co., Pittsburgh.

Tudor Boiler Mfg. Co., Cincinnati, O.

Walworth Mfg. Co., Boston, Mass.

Robt. Wetherill & Co., Chester, Pa.

Whitlock Coil Pipe Co., Hartford, Ct.

#### MERCHANTS

Charles Behler, 72 Trinity Pl., New York.

Cleveland Belting & Machinery Co., Cleveland, O.

McDowell & Co., Allegheny, Pa.

Manning, Maxwell & Moore, Inc., 86 Liberty St., New York.

Pfannmueller Engineering Co., First National Bank Bldg., Chicago, Ill.

Frank Toomey, 127-131 No. Third St., Philadelphia, Pa.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

#### Heaters, Gas—

L. B. Starrett Co., Athol, Mass.

#### Heaters, Gas, Gasoline and Oil—

Brown & Sharpe Mfg. Co., Providence, R. I.

Schneider & Trenkamp Div., Am. Stove Co., Cleveland, O.

#### Heaters, Gas, Water—

Schneider & Trenkamp Div., Am. Stove Co., Cleveland, O.

#### Heaters, Glue—

Advance Machinery Co., Toledo, O.

E. M. Dart Mfg. Co., Providence, R. I.

Fox Machine Co., Grand Rapids, Mich.

M Stuart & Peterson Co., Burlington, N. J.

#### Heaters, Glue, Electric—

General Electric Co., Schenectady, N. Y.

#### Heaters, Glue Pot—

Advance Machinery Co., Toledo, O.

#### Heaters, Gravel—

F. H. Evans, Brooklyn, N. Y.

#### Heaters, Hot Water—

Alberger Condenser Co., 95 Liberty St., New York.

Hayden & Derby Mfg. Co., 85-89 Liberty St., New York.

Benl. F. Kelley & Son, 25 Church St., New York.

#### Heaters, House—

(See Furnaces; also Boilers.)

#### Heaters, Kitchen, Boiler—

Schneider & Trenkamp Div., Am. Stove Co., Cleveland, O.

#### Heaters, Lamp Chimney—

W. B. Hartigan, Collinsville, Ct.

Wire Goods Co., Worcester, Mass.

#### Heaters, Lamp Chimney, Wire—

(See Household Articles, Wire.)

#### Heaters, Snd Iron—

Schneider & Trenkamp Div., Am. Stove Co., Cleveland, O.

#### Heaters, Tar—

F. H. Evans, Brooklyn, N. Y.

#### Heaters, Water, for Laundries, Textile Works, &c.—

Harrison Safety Boiler Works, 3194 17th St., Philadelphia, Pa.

#### Heating and Ventilating Apparatus—

American Blower Co., Detroit, Mich.

Bayley Mfg. Co., Milwaukee, Wis.

Boston Blower Co., Hyde Park, Mass.

Buffalo Forge Co., Buffalo, N. Y.

Exeter Machine Works, Exeter, N. H.

Green Fuel Economizer Co., Mattawan, N. Y.

Howard & Morse, 45 Fulton St., N. Y.

John H. McGowan Co., Cincinnati, O.

Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

B. F. Sturtevant Co., Boston, Mass.

Walworth Mfg. Co., Boston, Mass.

#### Heating and Ventilating Apparatus, Perforated Metal for—

Erdle Perforating Co., Rochester, N. Y.

Harrington & King Perforating Co., Chicago, Ill.

Manhattan Perforated Metal Co., 237 Centre St., New York.

#### Hedge Shear Handles—

(See Handles, Grass Hook, &c.)

#### Heel Chains, Plates, Stiffeners—

(See Chains, Plates, Stiffeners.)

#### Heel Stock—

(See Tap and Heel Stock.)

#### Heels, Shoe—

(See Lifts, Shoe.)

#### Heels, Shoe, Rubber—

Springfield Tire & Rubber Co., Springfield, O.

#### Heels, Spring, Motormen's—

Barney & Berry, Springfield, Mass.

#### Hide Rope—

(See Rope, Hide.)

#### Hinge Hasps, Nails, Plates—

(See Hasps, Nails, Plates.)

#### Hinge Machinery—

E. W. Bliss Co., Brooklyn, N. Y.

#### Hinge Machinery, Auto-

matic—

Baird Machine Co., Oakville, Ct.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

#### Hinges and Hasps, Box, Crate, &c.—

Acme Steel Goods Co., 2334-2340 Archer Ave., Chicago, Ill.

Cary Mfg. Co., 19-21 Roosevelt St., N. Y.

Griffin Mfg. Co., Erie, Pa.

McKinney Mfg. Co., Allegheny, Pa.

Stanley Works, New Britain, Ct.

#### Hinges and Pintles—

(See Fire Door and Shutter Hardware.)

#### Hinges, Automobile, Carriage—

Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

#### Hinges, Bag, Case and Trunk—

R. C. Jenkinson & Co., Newark, N. J.

J. H. Sessions & Son, Bristol, Ct.

#### Hinges, Ball Bearing—

Stanley Works, New Britain, Ct.

#### Hinges, Blind—

Hanson Bros., Plainville, Ct.

Charles Parker Co., Meriden, Ct.

Parker Wire Goods Co., Worcester, Mass.

Reading Hardware Co., Reading, Pa.

Stanley Works, New Britain, Ct.  
Susquehanna Casting Co., Wrightsville,  
Pa.

Wire Goods Co., Worcester, Mass.  
Wrightsville Hardware Co., Wrightsville,  
Pa.

**Hinges, Blind, Awning—**  
Parker Wire Goods Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.

**Hinges, Brass—**  
Arcade Mfg. Co., Freeport, Ill.  
Stanley Works, New Britain, Ct.

**Hinges, Brass, Bronze, &c.—**  
(See Butts and Hinges, Brass, Bronze,  
&c.)

**Hinges, Cabinet—**  
(See Cabinet Hinges.)

**Hinges, Checking Spring—**  
Joseph Bardsley, 147 Baxter St., N. Y.

**Hinges, Chest—**  
(See Butts, Wrought Steel.)

**Hinges, Door Spring—**  
Richards Mfg. Co., Aurora, Ill.

**Hinges, Fire Door and  
Shutter—**  
(See Fire Door and Shutter Hardware.)

**Hinges, Floor Spring—**  
Joseph Bardsley, 147 Baxter St., N. Y.  
Bommer Bros., Brooklyn, N. Y.  
Chicago Spring Butt Co., Chicago, Ill.  
Lawson Mfg. Co., 40 Dearborn St., Chi-  
cago, Ill.

Shelby Spring Hinge Co., Shelby, O.  
Superior Spring Hinge Co., 123 So. Clinton  
St., Chicago, Ill.

**Hinges, Folding Bed—**  
American Tube & Stamping Co., Bridge-  
port, Ct.

McKinney Mfg. Co., Allegheny, Pa.

**Hinges, Foundry Flask—**  
Susquehanna Casting Co., Wrightsville,  
Pa.

**Hinges, Gate—**  
Bommer Bros., Brooklyn, N. Y.  
Griffin Mfg. Co., Erie, Pa.  
M. Lanz & Sons, Pittsburgh, Pa.  
Charles Parker Co., Meriden, Ct.  
Reading Hardware Co., Reading, Pa.  
Susquehanna Casting Co., Wrightsville,  
Pa.

Wrightsville Hardware Co., Wrightsville,  
Pa.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Hinges, Jamb—**  
Bommer Bros., Brooklyn, N. Y.

**Hinges, Jamb, Spring—**  
Chicago Spring Butt Co., Chicago, Ill.

**Hinges, Link—**  
McKinney Mfg. Co., Allegheny, Pa.

**Hinges, Long Chest—**  
Griffin Mfg. Co., Erie, Pa.

McKinney Mfg. Co., Allegheny, Pa.  
Stanley Works, New Britain, Ct.

**Hinges, Malleable Iron—**  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Hinges, Mirror—**  
Eagle Lock Co., Terryville, Ct.

**Hinges, Ornamental—**  
(See Cabinet Hinges.)

**Hinges, Pivot—**  
Bommer Bros., Brooklyn, N. Y.  
Lawson Mfg. Co., 40 Dearborn St., Chi-  
cago, Ill.

**Hinges, Plate—**

Griffin Mfg. Co., Erie, Pa.  
Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Stanley Works, New Britain, Ct.

**Hinges, Refrigerator—**  
Arcade Mfg. Co., Freeport, Ill.  
Thomas Laughlin Co., Portland, Me.  
Reading Hardware Co., Reading, Pa.  
Riverside Metal Co., Riveride, N. J.  
Stanley Works, New Britain, Ct.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

**Hinges, Screen Door—**  
(See Hinges, Spring.)

**Hinges, Screw Hook, Strap  
and Eye—**

M. Lanz & Sons, Pittsburgh, Pa.  
Lawrence Bros., Sterling, Ill.  
McKinney Mfg. Co., Allegheny, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.  
Richards Mfg. Co., Aurora, Ill.

**Hinges, Showcase—**  
(See Hinges, Spring.)

**Hinges, Shutter—**  
Columbia Grey Iron Co., Columbia, Pa.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-18 Lafayette  
St., New York.  
Stanley Works, New Britain, Ct.  
Susquehanna Casting Co., Wrightsville,  
Pa.

Wrightsville Hardware Co., Wrightsville,  
Pa.

**Hinges, Spring—**  
Arcade Mfg. Co., Freeport, Ill.  
Bommer Bros., Brooklyn, N. Y.  
Chicago Spring Butt Co., Chicago, Ill.  
Lawson Mfg. Co., 40 Dearborn St., Chi-  
cago, Ill.

Reading Hardware Co., Reading, Pa.  
Scovill Mfg. Co., Waterbury, Ct.  
Shelby Spring Hinge Co., Shelby, O.  
Superior Spring Hinge Co., 123 So. Clin-  
ton St., Chicago, Ill.  
Susquehanna Casting Co., Wrightsville,  
Pa.

**Hinges, Spring, Fire Engine  
House Door—**

Bommer Bros., Brooklyn, N. Y.  
Chicago Spring Butt Co., Chicago, Ill.

**Hinges, Spring, Screen  
Door—**

(See Hinges, Spring.)

**Hinges, Spring, Water  
Closet Door—**

Bommer Bros., Brooklyn, N. Y.  
Chicago Spring Butt Co., Chicago, Ill.  
Reading Hardware Co., Reading, Pa.

**Hinges, Strap and Pintle—**  
Harry Zimmerman & Co., Fremont, O.

**Hinges, Strap and T. &c.—**  
Acme Steel Goods Co., 2334-2340 Archer  
Ave., Chicago, Ill.

Griffin Mfg. Co., Erie, Pa.  
Lawrence Bros., Sterling, Ill.

McKinney Mfg. Co., Allegheny, Pa.  
National Mfg. Co., Sterling, Ill.

Stanley Works, New Britain, Ct.

**Hinges, Strap and T. Corru-  
gated—**  
Stanley Works, New Britain, Ct.

- Hinges, Tail Board—**  
(See Hinges, Wagon End Gate.)
- Hinges, Trap Door—**  
Stanley Works, New Britain, Ct.
- Hinges, Trunk—**  
R. C. Jenkinson & Co., Newark, N. J.  
McKinney Mfg. Co., Allegheny, Pa.  
National Mfg. Co., Sterling, Ill.  
J. H. Sessions & Son, Bristol, Ct.  
Stanley Works, New Britain, Ct.
- Hinges, Wagon End Gate—**  
Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.  
Griffin Mfg. Co., Erie, Pa.  
Lawrence Bros., Sterling, Ill.  
McKinney Mfg. Co., Allegheny, Pa.  
National Mfg. Co., Sterling, Ill.
- Hinges, Wash Tray—**  
McKinney Mfg. Co., Allegheny, Pa.  
Stanley Works, New Britain, Ct.
- Hinges, Washing Machine—**  
Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.  
McKinney Mfg. Co., Allegheny, Pa.
- Hinges, Water Closet Seat—**  
Chicago Spring Butt Co., Chicago, Ill.  
Griffin Mfg. Co., Erie, Pa.  
Lawson Mfg. Co., 40 Dearborn St., Chicago, Ill.  
Reading Hardware Co., Reading, Pa.  
Stanley Works, New Britain, Ct.
- Hinges, Wire, Box—**  
Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.  
F. P. Smith & Co., Sharon Hill, Pa.
- Hinges, Wrought, to Order—**  
Griffin Mfg. Co., Erie, Pa.  
National Mfg. Co., Sterling, Ill.
- Hitches, Rope—**  
F. E. Myers & Bro., Ashland, O.  
Ney Mfg. Co., Canton, O.  
Steel Basket Co., Cedar Rapids, Ia.  
Whitman & Barnes Mfg. Co., Chicago, Ill.
- Hitching Posts, Rings, Ropes, Weights—**  
(See Posts, Rings, Ropes, Weights.)
- Hitching Post Rods—**  
Covert Mfg. Co., Troy, N. Y.
- Hitching Strap Adjusters—**  
(See Adjusters, Hammock Rope and Hitching Strap.)
- Hobbing Machines, Worm Wheel—**  
Gould & Eberhardt, Newark, N. J.  
Schuchardt & Schutte, 90 West St., N. Y.
- Hobble Chains—**  
(See Chains, Hobbles.)
- Hobs, Worm—**  
Brown & Sharpe Mfg. Co., Providence, R. I.
- Hods, Coal—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.  
S. M. Howes Co., Boston, Mass.  
Johnson Mfg. Co., Urbana, O.
- Hods, Mortar, Brick, &c.—**  
W. J. Clark Co., Salem, O.
- Hoe Brackets—**  
(See Brackets, Hoe.)
- Hoe Machinery—**  
(See Fork, Rake and Hoe Machinery.)
- Hoes, Accomac—**  
Hubbard & Co., Pittsburgh, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Hoes, Beet, Berry, &c.—**  
American Fork & Hoe Co., Cleveland, O.
- Hoes, Eye—**  
American Fork & Hoe Co., Cleveland, O.  
F. E. Kohler & Co., Canton, O.  
D. & H. Scovill Inc., Higganum, Ct.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.
- Hoes, Garden, Field, Mortar, Cotton, &c.—**  
American Fork & Hoe Co., Cleveland, O.  
Bateman Mfg. Co., Grenloch, N. J.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
John H. Graham & Co., 113 Chambers St., New York.  
F. E. Kohler & Co., Canton, O.
- Hoes, Grape—**  
American Fork & Hoe Co., Cleveland, O.  
Syracuse Chilled Plow Co., Syracuse, N. Y.
- Hoes, Grubbing—**  
American Fork & Hoe Co., Cleveland, O.  
Bateman Mfg. Co., Grenloch, N. J.  
Hubbard & Co., Pittsburgh, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Hoes, Hazel—**  
Hubbard & Co., Pittsburgh, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Hoes, Horse—**  
Bateman Mfg. Co., Grenloch, N. J.  
Syracuse Chilled Plow Co., Syracuse, N. Y.
- Hoes, Palmetto—**  
Hubbard & Co., Pittsburgh, Pa.
- Hoes, Plantation or Planters—**  
(See Hoes, Eye.)
- Hoes, Scuffle—**  
American Fork & Hoe Co., Cleveland, O.
- Hoes, Street—**  
American Fork & Hoe Co., Cleveland, O.  
Peter Gerlach Co., Cleveland, O.
- Hoes, Vineyard—**  
Hubbard & Co., Pittsburgh, Pa.
- Hoes, Weeding—**  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
F. E. Kohler & Co., Canton, O.  
North Wayne Tool Co., Hallowsell, Me.  
Ulrich Mfg. Co., Rock Falls, Ill.
- Hoes, Wheel—**  
Bateman Mfg. Co., Grenloch, N. J.
- Hog Rings, Ringers—**  
(See Rings and Ringers, Hog.)
- Hog Scrapers, Tonga—**  
(See Scrapers, Tonga.)
- Hoisting Cable, Flat—**  
(See Flat Cable for Mine Hoisting.)
- Hoisting Chain—**  
(See Chain, Crane, Cable, &c.)
- Hoisting Engines—**  
(See Engines, Hoisting.)
- Hoisting Hooks—**  
(See Hooks, Hoist and Crane.)
- Hoisting Machines—**  
Automatic Machine Co., Bridgeport, Ct.  
Alfred Box & Co., Front & Poplar Sts., Philadelphia, Pa.  
Brown Hoisting Machinery Co., Cleveland, O.  
Browning Engineering Co., Cleveland, O.  
Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.  
Chisholm & Moore Mfg. Co., Cleveland, O.  
Cleveland Crane & Engineering Co., Wickliffe, O.  
Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.

Eastern Machinery Co., New Haven, Ct.  
C. W. Hunt Co., West New Brighton,  
N. Y.  
Ingersoll-Rand Co., 11 Broadway, N. Y.  
Interstate Engineering Co., Bedford, O.  
Lidgerwood Mfg. Co., 96 Liberty St., N. Y.  
Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.  
Northern Engineering Works, Detroit,  
Mich.  
F. R. Patch Mfg. Co., Rutland, Vt.  
Pawling & Harnischfeger, Milwaukee,  
Wis.  
Robins Conveying Belt Co., Park Row  
Bldg., New York.  
Shepard Electric Crane & Hoist Co.,  
Montour Falls, N. Y.  
J. G. Speidel, Reading, Pa.  
Warner Elevator Mfg. Co., Cincinnati, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
Whiting Foundry Equipment Co., Har-  
vey, Ill.  
B. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.  
Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

#### MERCHANTS.

Baird Machinery Co., Pittsburgh, Pa.  
Broderick & Bascom Rope Co., St. Louis.  
Irving Mfg. & Tool Co., 157 Chambers St.,  
New York.  
A. Leschen & Sons Rope Co., St. Louis.  
McCoy & Brandt, Pittsburgh, Pa.  
McDowell & Co., Allegheny, Pa.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.  
Joseph T. Byerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.  
Shannon Engineering & Contracting Co.,  
Pittsburgh, Pa.  
Scully Steel & Iron Co., 69 N. Halsted  
St., Chicago, Ill.  
Jacob Ullman, Buffalo, N. Y.  
Wickes Bros., Saginaw, Mich.  
C. C. Wormer Machinery Co., Detroit,  
Mich.

#### Hoisting Towers—

Jeffrey Mfg. Co., Columbus, O.

#### Hoists, Ash—

Bethlehem Foundry & Machine Co., So.  
Bethlehem, Pa.  
Browning Engineering Co., Cleveland, O.  
Interstate Engineering Co., Bedford, O.  
Northern Engineering Works, Detroit,  
Mich.  
Otis Elevator Co., Railway Exchange,  
Chicago, Ill.  
Shepard Electric Crane & Hoist Co.,  
Montour Falls, N. Y.  
Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

#### Hoists, Brick and Mortar—

Thos. Carlin's Sons Co., N. S., Pitts-  
burgh, Pa.  
Colborne Mfg. Co., 38 E. Indiana St.,  
Chicago, Ill.  
Lidgerwood Mfg. Co., 96 Liberty St., N. Y.  
Shepard Electric Crane & Hoist Co.,  
Montour Falls, N. Y.  
Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

#### Hoists, Chain and Rope—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Boston & Lockport Block Co., East Bos-  
ton, Mass.  
Broderick & Bascom Rope Co., St. Louis.  
Brown Hoisting Machinery Co., Cleveland.  
Browning Engineering Co., Cleveland, O.  
Chisholm & Moore Mfg. Co., Cleveland, O.  
Cleveland Crane & Engineering Co.,  
Wickliffe, O.  
Colborne Mfg. Co., 38 E. Indiana St.,  
Chicago, Ill.  
E. Harrington, Son & Co., Inc., Phila-  
delphia, Pa.  
Irving Mfg. & Tool Co., 157 Chambers  
St., New York.  
Lane Bros. Co., Houghkeepsie, N. Y.  
A. Leschen & Sons Rope Co., St. Louis.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.  
Franklin Moore Co., Winsted, Ct.  
Ney Mfg. Co., Canton, O.  
Wm. S. Nicholls, 251 Broadway, N. Y.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.  
Northern Engineering Works, Detroit,  
Mich.  
Scully Steel & Iron Co., 69 N. Halsted  
St., Chicago, Ill.  
Shepard Electric Crane & Hoist Co.,  
Montour Falls, N. Y.  
J. G. Speidel, Reading, Pa.  
Warsaw Elevator Co., Warsaw, N. Y.  
Whiting Foundry Equipment Co., Har-  
vey, Ill.  
Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

#### Hoists, Cylinder—

Whiting Foundry Equipment Co., Har-  
vey, Ill.  
Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

#### Hoists, Dock—

Northern Engineering Works, Detroit,  
Mich.

#### Hoists, Electric—

Armington Electric Hoist Co., Euclid, O.  
Brown Hoisting Machinery Co., Cleve-  
land, O.  
Browning Engineering Co., Cleveland, O.  
Carlin Machinery & Supply Co., Inc.,  
N. S., Pittsburgh, Pa.  
Case Crane Co., Columbus, O.  
Chicago Pneumatic Tool Co., Fisher  
Bldg., Chicago, Ill.  
Cleveland Crane & Engineering Co.,  
Wickliffe, O.  
Crocket-Wheeler Co., Ampere, N. J.  
General Electric Co., Schenectady, N. Y.  
C. W. Hunt Co., West New Brighton,  
N. Y.  
Lidgerwood Mfg. Co., 96 Liberty St., New  
York.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.  
Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.  
Northern Engineering Works, Detroit,  
Mich.  
Pawling & Harnischfeger, Milwaukee,  
Wis.

- Robins Conveying Belt Co., Park Row Bldg., New York.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Taylor Machinery Co., Boston, Mass.  
 Wellman-Seaver-Morgan Co., Cleveland.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
 Whiting Foundry Equipment Co., Harvey, Ill.  
 Yale & Towne Mfg. Co., 9 Murray St., New York.
- Hoists, Foundry—**  
 Byram & Co., Detroit, Mich.
- Hoists, Friction Drum Belt—**  
 Humphrey & Sons, Joliet, Ill.  
 Northern Engineering Works, Detroit, Mich.  
 Whiting Foundry Equipment Co., Harvey, Ill.
- Hoists, Gantry—**  
 Interstate Engineering Co., Bedford, O.  
 Whiting Foundry Equipment Co., Harvey, Ill.  
 Yale & Towne Mfg. Co., 9 Murray St., New York.
- Hoists, Gas and Gasoline—**  
 Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.  
 Charter Gas Engine Co., Sterling, Ill.  
 Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.  
 Northern Engineering Works, Detroit, Mich.
- Hoists, Hand—**  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Boston & Lockport Block Co., Boston.  
 Case Crane Co., Columbus, O.  
 Chisholm & Moore Mfg. Co., Cleveland.  
 Cleveland Crane & Engineering Co., Wickliffe, O.  
 Cleveland Punch & Shear Works Co., Cleveland, O.  
 Franklin Portable Crane & Hoist Co., Franklin, Pa.  
 Clinton E. Hobbs, Boston, Mass.  
 Loudon Machinery Co., Fairfield, Ia.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Wm. S. Nicholls, 251 Broadway, New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Northern Engineering Works, Detroit, Mich.  
 Pawling & Harnischfeger, Milwaukee, Wis.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 J. G. Speidel, Reading, Pa.  
 Taylor Machinery Co., Boston, Mass.  
 Warsaw Elevator Co., Warsaw, N. Y.  
 Whiting Foundry Equipment Co., Harvey, Ill.  
 Yale & Towne Mfg. Co., 9 Murray St., New York.
- Hoists, Hydraulic—**  
 Morgan Engineering Co., Alliance, O.  
 Whiting Foundry Equipment Co., Harvey, Ill.
- Hoists, Ice—**  
 Brown Hoisting Machinery Co., Cleveland, O.
- Northern Engineering Works, Detroit, Mich.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Whiting Foundry Equipment Co., Harvey, Ill.  
 Yale & Towne Mfg. Co., 9 Murray St., New York.
- Hoists, Mine—**  
 Jeffrey Mfg. Co., Columbus, O.  
 Lidgerwood Mfg. Co., 96 Liberty St., N. Y.  
 Northern Engineering Works, Detroit, Mich.  
 Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.  
 Wellman-Seaver-Morgan Co., Cleveland, O.
- Hoists, Piano—**  
 Sycamore Wagon Works, Sycamore, Ill.  
 Yale & Towne Mfg. Co., 9 Murray St., New York.
- Hoists, Platform, Electric—**  
 Northern Engineering Works, Detroit, Mich.
- Hoists, Pneumatic—**  
 Brown Hoisting Machinery Co., Cleveland, O.  
 Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
 Clayton Air Compressor Works, 114-118 Liberty St., New York.  
 J. Gilmour, Bennett Bldg., New York.  
 Ingersoll-Rand Co., 11 Broadway, New York.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Wm. S. Nicholls, 251 Broadway, N. Y.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Northern Engineering Works, Detroit, Mich.  
 S. Obermayer Co., Cincinnati, O.  
 Craig Ridgway & Son Co., Coatesville, Pa.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.  
 Whiting Foundry Equipment Co., Harvey, Ill.
- Hoists, Portable—**  
 Boston & Lockport Block Co., East Boston, Mass.  
 Alfred Box & Co., Front & Poplar Sts., Philadelphia, Pa.  
 Brown Hoisting Machinery Co., Cleveland, O.  
 Browning Engineering Co., Cleveland, O.  
 Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.  
 Chisholm & Moore Mfg. Co., Cleveland, O.  
 Cleveland Crane & Engineering Co., Wickliffe, O.  
 Franklin Portable Crane & Hoist Co., Franklin, Pa.  
 Loudon Machinery Co., Fairfield, Ia.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Wm. S. Nicholls, 251 Broadway, N. Y.  
 Northern Engineering Works, Detroit, Mich.  
 Craig Ridgway & Son Co., Coatesville, Pa.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 J. G. Speidel, Reading, Pa.

**Stow Flexible Shaft Co.**, 20th and Callowhill Sts., Philadelphia, Pa.

**Wellman-Seaver-Morgan Co.**, Cleveland, O.  
**Whiting Foundry Equipment Co.**, Harvey, Ill.

**Yale & Towne Mfg. Co.**, 9 Murray St., New York.

**Hoists, Riveter—**  
**Cleveland Crane & Engineering Co.**, Wickliffe, O.

**Manning, Maxwell & Moore, Inc.**, 85 Liberty St., New York.

**Morgan Engineering Co.**, Alliance, O.  
**Northern Engineering Works**, Detroit, Mich.

**Joseph T. Ryerson & Son**, 13-22 Milwaukee Ave., Chicago, Ill.

**Shepard Electric Crane & Hoist Co.**, Montour Falls, N. Y.

**Whiting Foundry Equipment Co.**, Harvey, Ill.

**Yale & Towne Mfg. Co.**, 9 Murray St., New York.

**Hoists, Screw and Spur—**  
**Chisholm & Moore Mfg. Co.**, Cleveland, O.

**Yale & Towne Mfg. Co.**, 9 Murray St., New York.

**Hoists, Sidewalk—**  
**Bethlehem Foundry & Machine Co.**, South Bethlehem, Pa.

**Brown Hoisting Machinery Co.**, Cleveland, O.

**Energy Elevator Co.**, 214 New St., Philadelphia, Pa.

**Otis Elevator Co.**, Railway Exchange, Chicago, Ill.

**Sidney Elevator Mfg. Co.**, Sidney, O.  
**J. G. Spedel**, Reading, Pa.

**Storm Mfg. Co.**, Newark, N. J.

**Warner Elevator Mfg. Co.**, Cincinnati, O.  
**Warsaw Elevator Co.**, Warsaw, N. Y.

**Hoists, Skip—**  
**C. W. Hunt Co.**, West New Brighton, N. Y.

**Morgan Engineering Co.**, Alliance, O.  
**Wellman-Seaver-Morgan Co.**, Cleveland, O.

**Hoists, Telpher—**  
**Yale & Towne Mfg. Co.**, 9 Murray St., New York.

**Hoists, Traveling, Electric—**  
**Shepard Electric Crane & Hoist Co.**, Montour Falls, N. Y.

**Hoists, Trolley—**  
**Alfred Box Co.**, Front and Poplar Sts., Philadelphia, Pa.

**Brown Hoisting Machinery Co.**, Cleveland, O.

**Case Crane Co.**, Columbus, O.

**Chisholm & Moore Mfg. Co.**, Cleveland, O.  
**Cleveland Crane & Car Co.**, Wickliffe, O.

**C. W. Hunt Co.**, West New Brighton, N. Y.

**Interstate Engineering Co.**, Bedford, O.  
**Manning, Maxwell & Moore, Inc.**, 85 Liberty St., New York.

**Morgan Engineering Co.**, Alliance, O.  
**Niles-Bement-Pond Co.**, 111 Broadway, New York.

**Northern Engineering Works**, Detroit.

**Pawling & Harnischfeger**, Milwaukee, Wis.

**Shepard Electric Crane & Hoist Co.**, Montour Falls, N. Y.

**J. G. Spedel**, Reading, Pa.  
**Taylor Machinery Co.**, Boston, Mass.

**Whiting Foundry Equipment Co.**, Harvey, Ill.

**Yale & Towne Mfg. Co.**, 9 Murray St., New York.

**Hoists, Worm—**  
**Jones & Laughlin Steel Co.**, Pittsburgh.

**Whiting Foundry Equipment Co.**, Harvey, Ill.

**Holders, Bag—**  
**W. J. Clark Co.**, Salem O.

**Standard Scale & Supply Co.**, Pittsburgh, Pa.

**Holders, Barn Door—**  
**Arcade Mfg. Co.**, Freeport, Ill.

**Holders, Bit Brace Die—**  
**Butterfield & Co.**, Derby Line, Vt.

**Pratt & Whitney Co.**, Hartford, Ct.  
**M. F. Reece Co.**, Greenfield, Mass.

**Holders, Broom—**  
**Arcade Mfg. Co.**, Freeport, Ill.

**Lasher Mfg. Co.**, Davenport, Ia.  
**Raymond Mfg. Co.**, Corry, Pa.

**Wrightsville Hardware Co.**, Wrightsville, Pa.

**Holders, Broom, Brush, Comb, Soap Wire—**  
(See Household Articles, Wire.)

**Holders, Cabinet Scraper—**  
**Geo. H. Bishop & Co.**, Cincinnati, O.

**Holders, Card—**  
**Standard Wire Co.**, New Castle, Pa.

**Wire Goods Co.**, Worcester, Mass.

**Holders, Card and Label—**  
**Eagle Lock Co.**, Terryville, Ct.

**Parker Wire Goods Co.**, Worcester, Mass.

**Holders, Champagne Bottle, Silver and Silver Plated—**  
**International Silver Co.**, Meriden, Ct.

**Holders, Christmas Tree—**  
**North Bros. Mfg. Co.**, Philadelphia, Pa.

**Osborn Mfg. Co.**, Cleveland, O.  
**Wrightsville Hardware Co.**, Wrightsville, Pa.

**Holders, Copy, Typewriter—**  
**Beaton & Bradley Co.**, New Britain, Ct.

**Scranton & Co.**, New Haven, Ct.

**Holders, Crayon—**  
**D. C. Adams St.**, Louis, Mo.

**Luffkin Rule Co.**, Saginaw, Mich.

**Holders, Die—**  
**Brown & Sharpe Mfg. Co.**, Providence, R. I.

**S. W. Card Mfg. Co.**, Mansfield, Mass.

**J. M. Carpenter Tap & Die Co.**, Pawtucket, R. I.

**Pratt & Whitney Co.**, Hartford, Ct.

**M. F. Reece Co.**, Greenfield, Mass.

**Wells Bros. & Co.**, Greenfield, Mass.

**Wiley & Russell Mfg. Co.**, Greenfield, Mass.

**Holders, Divider Pencil—**  
**Keuffel & Esser Co.**, 127 Fulton St., New York.

**Holders, Door—**  
**Arcade Mfg. Co.**, Freeport, Ill.

**Joseph Bardsley**, 147-151 Baxter St., N. Y.

**Caldwell Mfg. Co.**, Rochester, N. Y.

**Crucible Steel Casting Co.**, Lansdowne, Pa.

**National Mfg. Co.**, Sterling, Ill.

**Reading Hardware Co.**, Reading, Pa.

**Richards Mfg. Co.**, Aurora, Ill.

**Russell & Erwin Mfg. Co.**, 94-98 Lafayette St., New York.



Superior Spring Hinge Co., 123 So. Clinton St., Chicago, Ill.  
Wire Goods Co., Worcester, Mass.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Holders, Drill and Tap—**  
Armstrong Bros. Tool Works, 109 N. Francisco Ave., Chicago, Ill.

Chandler & Farquhar Co., Boston, Mass.  
Goodell-Pratt Co., Greenfield, Mass.  
Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Pratt & Whitney Co., Hartford, Ct.  
A. D. Quint, Hartford, Ct.  
Robinson Tool Co., Waterbury, Ct.  
Wells Bros. Co., Greenfield, Mass.

**Holders, Electric Lamp—**  
H. A. Styles & Co., Boston, Mass.

**Holders, Electricians' Drill—**

Diamond Expansion Bolt Co., 90 West St., New York.  
Star Expansion Bolt Co., 147-149 Cedar St., New York.

**Holders, Extension Bit—**  
James Swan Co., Seymour, Ct.

**Holders, Extension Bit and Screw Driver—**  
H. H. Mayhew, Shelburne Falls, Mass.  
Millers Falls Co., 28 Warren St., N. Y.  
Stanley Rule & Level Co., New Britain, Ct.

**Holders, Flag Pole—**  
Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

**Holders, Floating Tool—**  
Cleveland Twist Drill Co., Cleveland, O.

**Holders, Fruit and Nut—**  
Fred J. Meyers Mfg. Co., Hamilton, O.

**Holders, Fruit Jar—**  
Benjamin P. Forbes, Cleveland, O.

**Holders, Gas—**  
Petroleum Iron Works Co., Sharon, Pa.  
Riter-Conley Mfg. Co., Pittsburgh, Pa.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Holders, Hose—**  
(See Hose Attachments.)

**Holders, Hose Nozzle—**  
Beaton & Bradley Co., New Britain, Ct.  
Specialty Mfg. Co., St. Anthony Park, Minn.

**Holders, Key—**  
Ames Sword Co., Chicopee, Mass.

**Holders, Letter, Office, &c.—**  
Dufur & Co., Baltimore, Md.

**Holders, Match and Match Box—**

Arcade Mfg. Co., Freeport, Ill.  
Columbia Grey Iron Co., Columbia, Pa.  
Taplin Mfg. Co., New Britain, Ct.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Holders, Micrometer—**  
Chandler & Farquhar Co., Boston, Mass.

**Holders, Mutton—**  
Landers, Frary & Clark, New Britain, Ct.

**Holders, Nipple—**  
Curtis & Curtis Co., Bridgeport, Ct.

**Holders, Oil Stone—**  
Walworth Mfg. Co., Boston, Mass.

**Holders, Pike—**  
Pike Mfg. Co., Pike, N. H.

**Holders, Photograph—**  
Parker Wire Goods Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.

**Holders, Pillow Sham—**  
Benjamin P. Forbes, Cleveland, O.

**Holders, Plaster, Wall—**  
H. E. Hessler Co., Syracuse, N. Y.

**Holders, Plate, Cup and Saucer—**

Parker Wire Goods Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.

**Holders, Reamer—**  
Billings & Spencer Co., Hartford, Ct.

Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

Pratt & Whitney Co., Hartford, Ct.

**Holders, Rein, Dash—**  
Fernald Mfg. Co., North East, Pa.

**Holders, Releasing Water Tap—**

Imperial Motor Co., Grove City, Pa.  
**Holders, Reversing Tap—**  
Geometric Tool Co., New Haven, Ct.

**Holders, Rope—**  
J. D. Warren Mfg. Co., Chicago, Ill.

**Holders, Sack—**  
(See Holders, Bag.)

**Holders, Sample—**  
W. C. Heller & Co., Montpelier, O.

J. D. Warren Mfg. Co., Chicago, Ill.

**Holders, Soap—**  
(See Household Articles.)

**Holders, Spoon, Cheese, &c., Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Holders, Stake, Wagon—**  
Griffin Mfg. Co., Erie, Pa.

Louden Machinery Co., Fairfield, Ia.  
Stanley Works, New Britain, Ct.

**Holders, Stirrer—**  
Joseph Dixon Crucible Co., Jersey City, N. J.

**Holders, Test Tube—**  
United States Clothes Pin Co., Montpelier, Vt.

**Holders, Tire Bolt—**  
Wiley & Russell Mfg. Co., Greenfield, Mass.

**Holders, Toilet Paper—**  
Shelby Spring Hinge Co., Shelby, O.

**Holders, Tool—**  
Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.  
Cleveland Twist Drill Co., Cleveland, O.

Goodell-Pratt Co., Greenfield, Mass.  
Keystone Mfg. Co., Buffalo, N. Y.

Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

O. K. Tool Holder Co., Shelton, Ct.  
Pratt & Whitney Co., Hartford, Ct.

Western Tool & Mfg. Co., Springfield, O.

**Holders, Tooth Pick, Aluminum—**

Hero Fruit Jar Co., Philadelphia, Pa.

**Holders, Trace—**  
Fernald Mfg. Co., North East, Pa.

**Holders, Tumbler—**  
Erie Specialty Co., Erie, Pa.

**Holders, Turret Tool—**  
Cleveland Twist Drill Co., Cleveland, O.

**Holders, Twine—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

Parker Wire Goods Co., Worcester, Mass.

**Hollow Augers, Drills, &c.**—

(See Augers, Drills, &c.)

**Hollow Handle Tool Sets**—

(See Sets, Tool, Hollow Handle.)

**Hollow Ware**—

(See Ware, Hollow, Silver Plated, Steel, &c.)

**Hones, Carborundum**—

Carborundum Co., Niagara Falls, N. Y.

**Hones, Emery and Corundum**—

American Emery Wheel Works, Providence, R. I.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

**Hones, Razor**—

American Emery Wheel Works, Providence, R. I.

Pike Mfg. Co., Pike, N. H.

**Hoods, Automobile**—

(See Automobile Hoods.)

**Hoof Knives**—

(See Knives, Farriers.)

**Hook and Eye Machinery**—

Baird Machine Co., Oakville, Ct.

Blake & Johnson Co., Waterbury, Ct.

E. J. Manville Machine Co., Waterbury, Ct.

A. H. Nilson Mach. Co., Bridgeport, Ct.

**Hook Head Bolts**—

(See Bolts, Special.)

**Hook Plates, Steel**—

(See Plates, Pipe Hook, Steel.)

**Hooks and Eyes, Brass and Steel**—

M. S. Brooks & Sons, Chester, Ct.

Parker Wire Goods Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

**Hooks and Eyes, Screw**—

(See Wire Goods, Bright.)

**Hooks and Staples, Wire**—

Lawrence Bros., Sterling, Ill.

Wire Goods Co., Worcester, Mass.

**Hooks and Thimbles**—

Broderick & Bascom Rope Co., St. Louis,

Covert Mfg. Co., Troy, N. Y.

M. Lanz & Sons, Pittsburgh, Pa.

Thomas Laughlin Co., Portland, Me.

A. Leschen & Sons Rope Co., St. Louis,

W. & J. Tiebout, 118 Chambers St., New York.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Hooks, Awning**—

Thomas Laughlin Co., Portland, Me.

Parker Wire Goods Co., Worcester, Mass.

W. & J. Tiebout, 118 Chambers St., New York.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Hooks, Back Band**—

(See Buckles, Back Band.)

**Hooks, Bale, Box, Hog-head, &c.**—

Thomas Laughlin Co., Portland, Me.

W. & J. Tiebout, 118 Chambers St., New York.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Hooks, Belt**—

Billings & Spencer Co., Hartford, Ct.

Bristol Co., Waterbury, Ct.

John H. Graham & Co., 113 Chambers St., New York.

E. Jenckes Mfg. Co., Pawtucket, R. I.

Morgan Spring Co., Worcester, Mass.

Parker Wire Goods Co., Worcester, Mass.

F. P. Smith & Co., Sharon Hill, Pa.

W. O. Talcott, Providence, R. I.

Upon Nut Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

(See also Fasteners, Belt; Belt Lacing.)

**Hooks, Bench**—

(See Stops, Bench.)

**Hooks, Bicycle Store**—

Wire Goods Co., Worcester, Mass.

**Hooks, Bird Cage**—

Arcade Mfg. Co., Freeport, Ill.

Columbia City Iron Co., Columbia, Pa.

Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Kilbourne Mfg. Co., Troy, N. Y.

Landers, Frary & Clark, New Britain, Ct.

Fred J. Meyers Mfg. Co., Hamilton, O.

Parker Wire Goods Co., Worcester, Mass.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Turner & Staunton Co., Norwich, Ct.

Wire Goods Co., Worcester, Mass.

**Hooks, Block, Releasing**—

Boston & Lockport Block Co., East Boston, Mass.

**Hooks, Boat**—

Thomas Laughlin Co., Portland, Me.

W. & J. Tiebout, 118 Chambers St., New York.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Hooks, Box, Cotton and Hay**—

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Hooks, Brine**—

Parker Wire Goods Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

**Hooks, Bush**—

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Hooks, Button**—

Louis Sacks, Newark, N. J.

**Hooks, Cabin Door**—

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Hooks, Cant**—

Boston & Lockport Block Co., East Boston, Mass.

Peter Gerlach Co., Cleveland, O.

Keystone Drop Forge Works, Chester, Pa.

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

**Hooks, Carrying**—

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

**Hooks, Ceiling**—

(See Hooks, Coat, Hat, &c.)

**Hooks, Chain**—

Case Crane Co., Columbus, O.

Keystone Drop Forge Works, Chester, Pa.

Thomas Laughlin Co., Portland, Me.

- New Castle Forge & Bolt Co., New Castle, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Standard Chain Co., Pittsburgh, Pa.  
 Trow & Holden, Barre, Vt.  
 Wilcox, Crittenden & Co., Inc., Middletown, Ct.  
 J. H. Williams & Co., Brooklyn, N. Y.
- Hooks, Chandelier or Lamp—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Columbia Grey Iron Co., Columbia, Pa.  
 Landers, Frary & Clark, New Britain, Ct.  
 National Tube Co., Pittsburgh, Pa.  
 Parker Wire Goods Co., Worcester, Mass.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 Wire Goods Co., Worcester, Mass.
- Hooks, Clam—**  
 American Fork & Hoe Co., Cleveland, O.
- Hooks, Clothes Line—**  
 Columbia Grey Iron Co., Columbia, Pa.  
 Landers, Frary & Clark, New Britain, Ct.  
 Thomas Laughlin Co., Portland, Me.  
 Parker Wire Goods Co., Worcester, Mass.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 Susquehanna Casting Co., Wrightsville, Pa.  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
 Wilcox, Crittenden & Co., Inc., Middletown, Ct.  
 Wire Goods Co., Worcester, Mass.
- Hooks, Coat, Hat, &c.—**  
 Arcade Mfg. Co., Freeport, Ill.  
 John H. Graham & Co., 113 Chambers St., New York.  
 E. Jenckes Mfg. Co., Pawtucket, R. I.  
 Landers, Frary & Clark, New Britain, Ct.  
 Lawrence Bros., Sterling, Ill.  
 National Mfg. Co., Sterling, Ill.  
 Parker Wire Goods Co., Worcester, Mass.  
 Peck, Stow & Wilcox Co., 27 Murray St., New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 Shelby Spring Hinge Co., Shelby, O.  
 Susquehanna Casting Co., Wrightsville, Pa.  
 Taylor & Boggis Foundry Co., Cleveland, O.  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
 Turner & Stanton Co., Norwich, Ct.  
 Wire Goods Co., Worcester, Mass.  
 Wright Wire Co., Worcester, Mass.  
 Yale & Towne Mfg. Co., 9 Murray St., New York.
- Hooks, Conductor Pipe—**  
 Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.  
 Iwan Bros., South Bend, Ind.
- Hooks, Convex—**  
 (See Hooks and Eyes, Brass.)
- Hooks, Corn and Tobacco—**  
 American Fork & Hoe Co., Cleveland, O.  
 Woodell Co., Antrim, N. H.
- John H. Graham & Co., 113 Chambers St., New York.  
 National Saw Co., Newark, N. J.  
 North Wayne Tool Co., Hallowell, Me.
- Hooks, Cotton—**  
 (See Hooks, Box, Cotton and Hay.)
- Hooks, Cup and Shoulder—**  
 E. Jenckes Mfg. Co., Pawtucket, R. I.  
 Landers, Frary & Clark, New Britain, Ct.  
 Parker Wire Goods Co., Worcester, Mass.  
 Reading Hardware Co., Reading, Pa.  
 Spencer Wire Co., Worcester, Mass.  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
 Turner & Stanton Co., Norwich, Ct.  
 Wire Goods Co., Worcester, Mass.
- Hooks, Curtain Rod—**  
 Parker Wire Goods Co., Worcester, Mass.
- Hooks, Desk, Mirror, Telegraph, Tassel, Brush, Duster, Kitchen, &c.—**  
 Parker Wire Goods Co., Worcester, Mass.  
 Wire Goods Co., Worcester, Mass.
- Hooks, Drive—**  
 M. Lanz & Sons, Pittsburgh, Pa.  
 New Castle Forge & Bolt Co., New Castle, Pa.
- Hooks, S and S—**  
 Covert Mfg. Co., Troy, N. Y.  
 Parker Wire Goods Co., Worcester, Mass.  
 Smith & Egge Mfg. Co., Bridgeport, Ct.  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
 Wire Goods Co., Worcester, Mass.
- Hooks, Fire Pail—**  
 Parker Wire Goods Co., Worcester, Mass.  
 Reading Hardware Co., Reading, Pa.  
 Wire Goods Co., Worcester, Mass.
- Hooks, Floor Pulley—**  
 M. Lanz & Sons, Pittsburgh, Pa.  
 Loudon Machinery Co., Fairfield, Ia.  
 F. E. Myers & Bro., Ashland, O.  
 New Castle Forge & Bolt Co., New Castle, Pa.  
 Ney Mfg. Co., Canton, O.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Parker Wire Goods Co., Worcester, Mass.  
 Wire Goods Co., Worcester, Mass.
- Hooks, Gaff Topsail—**  
 Thomas Laughlin Co., Portland, Me.  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
 Wilcox, Crittenden & Co., Inc., Middletown, Ct.
- Hooks, Gate and Door—**  
 Covert Mfg. Co., Troy, N. Y.  
 Landers, Frary & Clark, New Britain, Ct.  
 M. Lanz & Sons, Pittsburgh, Pa.  
 National Mfg. Co., Sterling, Ill.  
 New Castle Forge & Bolt Co., New Castle, Pa.  
 Parker Wire Goods Co., Worcester, Mass.  
 Reading Hardware Co., Reading, Pa.  
 Wire Goods Co., Worcester, Mass.
- Hooks, Grass—**  
 E. C. Atkins & Co., Indianapolis, Ind.  
 Cronk & Carrier Mfg. Co., Elmira, N. Y.  
 John H. Graham & Co., 113 Chambers St., New York.  
 North Wayne Tool Co., Hallowell, Me.  
 Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.
- Hooks, Hammock—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Keystone Drop Forge Works, Chester, Pa.  
 Landers, Frary & Clark, New Britain, Ct.  
 New Castle Forge & Bolt Co., New Castle, Pa.  
 I. E. Palmer Co., Middletown, Ct.

**Parker Wire Goods Co.**, Worcester, Mass.  
**Peck, Stow & Wilcox Co.**, 27 Murray St., New York.  
**Russell & Erwin Mfg. Co.**, 94-98 Lafayette St., New York.  
**Susquehanna Casting Co.**, Wrightsville, Pa.  
**W. & J. Tiebout**, 118 Chambers St., N. Y.  
**Wire Goods Co.**, Worcester, Mass.  
**Hooks, Hand Forged—**  
**W. W. Patterson Co.**, Pittsburgh, Pa.

**Hooks, Hanging—**  
**Oliver Iron & Steel Co.**, Pittsburgh, Pa.

**Hooks, Harness—**  
**Arcade Mfg. Co.**, Freeport, Ill.  
**Billings & Spencer Co.**, Hartford, Ct.  
**S. Cheney & Son**, Manlius, N. Y.  
**Heath Foundry & Mfg. Co.**, Plymouth, O.  
**Lawrence Bros.**, Sterling, Ill.  
**Fred J. Meyers Mfg. Co.**, Hamilton, O.  
**Ney Mfg. Co.**, Canton, O.  
**Parker Wire Goods Co.**, Worcester, Mass.  
**Peck, Stow & Wilcox Co.**, 27 Murray St., New York.

**Reading Hardware Co.**, Reading, Pa.  
**Russell & Erwin Mfg. Co.**, 94-98 Lafayette St., New York.  
**Stewart Iron Works Co.**, Cincinnati, O.  
**Susquehanna Casting Co.**, Wrightsville, Pa.

**Hooks, Harness, Snap—**  
**Covert Mfg. Co.**, Troy, N. Y.

**Hooks, Hasps and Staples—**  
 (See Wrought Iron Goods.)

**Hooks, Hinge—**  
**New Castle Forge & Bolt Co.**, New Castle, Pa.

**Hooks, Hog—**  
**John Chatillon & Sons**, 85 Cliff St., N. Y.

**Hooks, Hoist and Crane—**  
**Block-Pollak Iron Co.**, Cincinnati, O.  
**Boston & Lockport Block Co.**, East Boston, Mass.

**Case Crane Co.**, Columbus, O.  
**Keystone Drop Forge Works**, Chester, Pa.  
**W. W. Patterson Co.**, Pittsburgh, Pa.  
**J. H. Williams & Co.**, Brooklyn, N. Y.

**Hooks, Hop—**  
**American Fork & Hoe Co.**, Cleveland, O.

**Hooks, Ice—**  
 (See Ice Harvesting Tools.)

**Hooks, Jamb—**  
**M. Lanz & Sons**, Pittsburgh, Pa.  
**New Castle Forge & Bolt Co.**, New Castle, Pa.

**Hooks, Lantern, Safety—**  
**Wire Goods Co.**, Worcester, Mass.

**Hooks, Log and Switch Chain—**  
**New Castle Forge & Bolt Co.**, New Castle, Pa.

**Standard Chain Co.**, Pittsburgh, Pa.  
**Hooks, Match or Sister—**  
**Thomas Laughlin Co.**, Portland, Me.

**Hooks, Meat—**  
**Enterprise Mfg. Co. of Pa.**, Philadelphia, Pa.

**Landers, Frary & Clark**, New Britain, Ct.  
**New Castle Forge & Bolt Co.**, New Castle, Pa.

**Parker Wire Goods Co.**, Worcester, Mass.  
**Philadelphia Steel & Wire Co.**, 525 Commerce St., Philadelphia, Pa.

**Wire Goods Co.**, Worcester, Mass.  
**Hooks, Mirror—**  
**Wire Goods Co.**, Worcester, Mass.

**Hooks, Molding—**  
 (See Hooks, Picture Molding.)

**Hooks, Oil Well—**  
**W. W. Patterson Co.**, Pittsburgh, Pa.

**Hooks, Overhead Carrying Track—**

**Broderick & Bascom Rope Co.**, St. Louis.  
**A. Leschen & Sons Rope Co.**, St. Louis.  
**Louden Machinery Co.**, Fairfield, Ia.  
**F. E. Myers & Bro.**, Ashland, O.  
**Whitman & Barnes Mfg. Co.**, Chicago, Ill.

**Hooks, Pad—**  
**Judson L. Thomson Mfg. Co.**, Waltham, Mass.

**Hooks, Painters' Ladder—**  
**Wire Goods Co.**, Worcester, Mass.

**Hooks, Picture—**  
**Wire Goods Co.**, Worcester, Mass.

**Hooks, Picture Molding—**  
**Parker Wire Goods Co.**, Worcester, Mass.  
**Turner & Stanton Co.**, Norwich, Ct.  
**Wire Goods Co.**, Worcester, Mass.

**Hooks, Pipe—**  
**Beaton & Bradley Co.**, New Brighton, Ct.  
**Berger Bros. Co.**, 231-237 Arch St., Philadelphia, Pa.

**Wm. H. Haskell Mfg. Co.**, Pawtucket, R. I.  
**Hooks, Potato, Manure, &c.—**  
**American Fork & Hoe Co.**, Cleveland, O.

**Hooks, Punch Bowl—**  
**Turner & Stanton Co.**, Norwich, Ct.

**Hooks, Sap Spout—**  
**Parker Wire Goods Co.**, Worcester, Mass.

**Hooks, Screw Wire—**  
 (See Wire Goods, Bright.)

**Hooks, Seat Wagon—**  
**Oliver Iron & Steel Co.**, Pittsburgh, Pa.

**Hooks, Shackle—**  
**Keystone Drop Forge Works**, Chester, Pa.

**Hooks, Shoe Lacing—**  
**Judson L. Thomson Mfg. Co.**, Waltham, Mass.

**Tubular Rivet & Stud Co.**, Boston, Mass.

**Hooks, Singletree—**  
**Oliver Iron & Steel Co.**, Pittsburgh, Pa.

**Hooks, Staple, &c.—**  
 (See Wrought Iron Goods.)

**Hooks, Store Rack—**  
**Reading Hardware Co.**, Reading, Pa.

**Hooks, Strap—**  
**Parker Wire Goods Co.**, Worcester, Mass.  
**Wire Goods Co.**, Worcester, Mass.

**Hooks, Tassel—**  
**Turner & Stanton Co.**, Norwich, Ct.

**Wire Goods Co.**, Worcester, Mass.

**Hooks, Telegraph—**  
**Parker Wire Goods Co.**, Worcester, Mass.

**Hooks, Ticket—**  
**Parker Wire Goods Co.**, Worcester, Mass.  
**Wire Goods Co.**, Worcester, Mass.

**Hooks, Timber Carrying—**  
**Peter Gerlach Co.**, Cleveland, O.

**Hooks, Toilet and Towel—**  
**Reading Hardware Co.**, Reading, Pa.

**Yale & Towne Mfg. Co.**, 9 Murray St., New York.

**Hooks, Wedding—**  
**Arcade Mfg. Co.**, Freeport, Ill.

**Hooks, Well Wheel—**  
**Reading Hardware Co.**, Reading, Pa.

**Hooks, Whistle Cord—**  
**American Railway Supply Co.**, 24 Place, New York.

**Hoop Brass—**  
(See Brass.)  
**Hoop Fasteners—**  
(See Staples, Cooperage.)  
**Hoops and Bands—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Carnegie Steel Co., Pittsburgh, Pa.  
Jones & Laughlin Steel Co., Pittsburgh.  
Pittsburgh Steel Co., Pittsburgh, Pa.  
West Leechburg Steel Co., Pittsburgh, Pa.

**MERCHANTS.**  
Bourne-Fuller Co., Cleveland, O.  
Ruell & Mitchell, 120 Liberty St., N. Y.  
Dilworth, Gilbert & Towne, Inc., 35-37  
Wooster St., New York.

Cal. Hirsch & Sons Iron & Rail Co., St.  
Louis, Mo.

C. B. Houston & Co., Girard Bldg.,  
Philadelphia, Pa.

Harold McCalla, 44 Fairmount Ave.,  
Philadelphia, Pa.

Ogden & Wallace, 577 Greenwich St.,  
New York.

Pierson & Co., 29 Broadway, New York.  
Horace T. Potts & Co., 316 N. 3d St.,  
Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and  
Wayman Sts., Chicago, Ill.

Charles G. Stevens Co., 60 So. Canal  
St., Chicago, Ill.

Woodward, Wight & Co., Ltd., New  
Orleans, La.

**Hoops and Bands, Galva-**  
**nized—**

(See Galvanized Angles, Bars, &c.)  
**Hoops for Slack Barrel**  
**Cooperage—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Carnegie Steel Co., Pittsburgh, Pa.

**Hoops, Mast—**  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Hoops, Steel, Punched and**  
**Flared—**

Tower Mfg. Co., Cincinnati, O.

**Hoops, Tub—**  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

**Hoops, Wire, Barrel and**  
**Keg—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

**Hoppers, Coal and Gas Pro-**  
**ducer—**

R. Munroe & Sons Mfg. Corporation,  
Pittsburgh, Pa.

**Hoppers, Slop—**  
(See Sinks, Slop.)

**Horns, Electric—**  
Heltzer-Cabot Electric Co., Boston, Mass.

**Horns, Fog—**  
Dover Stamping & Mfg. Co., Cambridge,  
Mass.

**Horns, Shoe—**  
International Silver Co., Meriden, Ct.

**Horse Clippers, &c.—**  
(See Clippers, &c.)

**Horse Clipping Shears—**  
(See Shears, Roaching.)

**Horse Hay Forks—**  
(See Haying Tools.)

**Horse Powers—**  
s Carlin's Sons Co., N. S. Pitta-  
h, Pa.

F. E. Myers & Bro., Ashland, O.

**Horse Shoes—**  
(See Shoes, Horse and Mule.)

**Horse Ties—**  
(See Ties, Cattle and Horse.)

**Horse Tooth Rasps—**  
(See Rasps, Horse Tooth.)

**Horseshoe Iron—**  
(See Iron, Horseshoe.)

**Horseshoe Machinery—**  
E. W. Bliss Co., Brooklyn, N. Y.

**Horseshoers' Vises—**  
(See Vises, Horseshoers'.)

**Hose, Air Brake and Sig-**  
**nal—**

New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Hose, Air Tool—**  
Clayton Air Compressor Works, 114-118  
Liberty St., New York.

New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Hose Attachments (Mend-**  
**ers, Couplings, Bands,**

**Holders, Reducers,**  
**Clamps, Caps, &c.)—**

Beaton & Bradley Co., New Britain, Ct.  
Chicago Pneumatic Tool Co., Fisher Bldg.,  
Chicago, Ill.

W. J. Clark Co., Salem, O.

A. W. Findlay Co., Inc., 23d and Market  
Sts., Philadelphia, Pa.

Globe Machine & Stamping Co., Cleve-  
land, O.

John H. Graham & Co., 113 Chambers  
St., New York.

Helwig Mfg. Co., St. Paul, Minn.

Ingersoll-Rand Co., 11 Broadway, N. Y.

F. E. Kohler & Co., Canton, O.

Osborn Mfg. Co., Cleveland, O.

**Hose, Car Henting—**  
New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Hose, Fire—**  
New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Hose, Garden—**  
New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Hose Nozzle Holders—**  
(See Holders, Hose Nozzle.)

**Hose, Steam—**  
New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Hose, Suction—**  
New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Hot House Pulleys—**  
(See Pulleys, Hot House.)

**Hot Plates, Gas—**  
(See Plates, Hot Gas.)

**Hotel and Restaurant Cook-**  
**ing Apparatus (Stock Boil-**

**ers, Roasting Ovens, Vege-**  
**table Boilers and Steam-**

**ers, Oyster Stewers, Fur-**  
**nace and Caldron, &c.)—**

Lalanc & Grosjean Mfg. Co., 299 Broad-  
way, New York.

Schneider & Trenkamp Division, American  
Stove Co., Cleveland, O.

**Hotel Ware, Silver Plated—**  
International Silver Co., Meriden, Ct.

**House Heaters—**  
(See Furnaces.)

**House Wreckers—**

(See Wreckers, House.)

**Household Articles. Wire**  
(Dish Covers, Easels, Plate  
Handlers, Lamp Chimney  
Heaters, Broom Holders,  
Brush and Comb Holders,  
Soap Holders, Table Mats,  
Meat Rests, Shirt Rests,  
Stove Pipe Shelves, Soap  
Brackets, Tea and Coffee  
Pot Stands, Tea and Coffee  
Pot Strainers, &c.)—

Andrews Wire & Iron Works, Rockford,  
Ill.

Edward Darby & Sons, 233-235 Arch St.,  
Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

Kilbourne Mfg. Co., Troy, N. Y.

Fred J. Meyers Mfg. Co., Hamilton, O.

Parker Wire Goods Co., Worcester, Mass.

Standard Wire Co., New Castle, Pa.

Wire Goods Co., Worcester, Mass.

**Houses, Knock Down—**

(See Houses, Portable.)

**Houses, Portable—**

Phoenix Mfg. Co., Milwaukee, Wis.

**Houses, Wire Summer—**

Dufur & Co., Baltimore, Md.

Eacey Wire Works Co., 59 Fulton St.,  
New York.

Ludlow-Saylor Wire Co., St. Louis, Mo.

Fred J. Meyers Mfg. Co., Hamilton, O.

**Hub Boring Machines—**

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Silver Mfg. Co., Salem, O.

**Hub Machines, Bicycle—**

Garvin Machine Co., Spring and Varick  
Sta., New York.

**Hubs, Bicycle—**

John H. Graham & Co., 113 Chambers  
St., New York.

John R. Keim Mills, Inc., Buffalo, N. Y.

Worcester Pressed Steel Co., Worcester,  
Mass.

**Hubs, Steel Automobile—**

John R. Keim Mills, Inc., Buffalo, N. Y.

Richmond Forgings Corporation, Rich-  
mond, Va.

**Hulls and Barges, Steel—**

(See Barges and Hulls.)

**Huskies, Pins and Gloves—**

Arcade Mfg. Co., Freeport, Ill.

John H. Graham & Co., 113 Chambers  
St., New York.

**Hydrant Chain—**

(See Chain, Hydrant.)

**Hydrants and Street Wash-**

ers—  
Barnes Mfg. Co., Mansfield, O.

Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.

Goulds Mfg. Co., Seneca Falls, N. Y.

Humphries Mfg. Co., Mansfield, O.

Kennedy Valve Mfg. Co., 57 Beekman  
St., New York.

Lynchburg Foundry Co., Lynchburg, Va.

Mast, Foss & Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

Pittsburgh Mfg. Co., Pittsburgh, Pa.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Hydraulic Accumulators.**

**Cranes, &c.—**

(See Accumulators, Cranes, &c.)

**Hydraulic Machinery—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Birdsboro Steel Foundry & Machine Co.,  
Birdsboro, Pa.

Chambersburg Engineering Co., Chambers-  
burg, Pa.

Richard Dudgeon, 24-26 Columbia St.,  
New York.

Duff Mfg. Co., Pittsburgh, Pa.

C. F. Elmes Engineering Works, 253-259  
C. Fulton St., Chicago, Ill.

A. Garrison Foundry Co., Pittsburgh, Pa.

Hyde Park Foundry & Machine Co.,  
Hyde Park, Pa.

John H. McGowan Co., Cincinnati, O.

Mackintosh, Hemphill & Co., Pittsburgh,  
Pa.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Engineering Co., Alliance, O.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Pennsylvania Engineering Works, New  
Castle, Pa.

Philadelphia Roll & Machine Co., 23d  
St. & Washington Ave., Philadelphia.

Poole Engineering & Machine Co., Balti-  
more, Md.

S. R. Smythe Co., Pittsburgh, Pa.

United Engineering & Foundry Co., Pitts-  
burgh, Pa.

Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

Watson-Stillman Co., 50 Church St., N.Y.

Wellman-Seaver-Morgan Co., Cleveland, O.

Williams, White & Co., Inc., Moline, Ill.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**MERCHANTS.**

Manning, Maxwell & Moore, Inc., 85-89  
Liberty St., New York.

Marshall & Huchart Machinery Co., 62  
S. Canal St., Chicago, Ill.

Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted  
St., Chicago, Ill.

A. D. White Machinery Co., 27-31 S.  
Jefferson St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

C. O. Wormer Machinery Co., Detroit,  
Mich.

**Hydro-Carbon Lamps—**

(See Lamps, Gasoline (Gas).)

**Hydrometers—**

American Steam Gauge & Valve Co.,  
Boston, Mass.

Riggs & Bros., 310 Market St., Philadel-  
phia, Pa.

**Ice Axes, Bars, &c.—**

(See Axes, Bars, &c.)

**Ice Bowls—**

(See Bowls, Silver Plated.)

**Ice Chests—**

(See Refrigerators and Ice Chests.)

**Ice Chisels—**

(See Picks and Awls, Ice.)

**Ice Cream Packing Cans—**

(See Cans, Ice Cream Packing.)

**Ice Cream Tubs—**

(See Pails and Tubs.)

**Ice Cutting Machines—**

H. W. Caldwell & Son Co., 17th St. and  
Western Ave., Chicago, Ill.

C. E. Jennings & Co., 42 Murray St.  
New York.

- Ice Harvesting Tools**  
(Augers, Breakers, Chisels, Forks, Bars, Grapplers, Hooks, Markers, Measuring Irons, Planes, Plows, House and Car Runs, Saws, Shavers, Scrapers, Adzes and Scoop Nets)—  
American Fork & Hoe Co., Cleveland, O.  
Barney & Berry, Springfield, Mass.  
H. W. Caldwell & Son Co., 17th St. and Western Ave., Chicago, Ill.  
Peter Gerlach Co., Cleveland, O.  
Gifford-Wood Co., Arlington, Mass.  
A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.  
L. & I. T. White Co., Buffalo, N. Y.
- Ice Making Machinery**—  
American Welding Co., Carbondale, Pa.  
Pacific Iron Works, Bridgeport, Ct.  
Vilter Mfg. Co., Milwaukee, Wis.
- Ice Pick Handles**—  
(See Handles, Grass Hook, &c.)
- Ice Picks**—  
(See Picks and Awls, Ice.)
- Igniters, Gas and Gasoline Engine**—  
Holtzer-Cabot Electric Co., Boston, Mass.
- Implementers, Agricultural and Garden**—  
(See Agricultural Implementa.)
- Implementers, Gun**—  
(See Gun Implementa.)
- Importers, Hardware and Cutlery**—  
Hermann Boker & Co., 101 Duane St., New York.  
Burditt & Williams Co., Boston, Mass.  
Wiebusch & Hilker, Ltd., 106-110 Lafayette St., New York.
- Importers, Iron and Steel**—  
Reed F. Blair & Co., Pittsburgh, Pa.  
Buell & Mitchell, 120 Liberty St., N. Y.  
Arthur C. Harvey Co., Boston, Mass.  
Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.  
B. M. Jones & Co., Inc., Boston, Mass.  
A. Milne & Co., 1 Broadway, New York.  
J. J. Mohr, Bullitt Bldg., Philadelphia.  
Edgar M. Moore & Co., Pittsburgh, Pa.  
Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Pierson & Co., 29 Broadway, New York.  
Pilling & Crane, Girard Bldg., Philadelphia, Pa.  
Horace T. Potts & Co., 316 N. 3d St., Philadelphia, Pa.  
Thos. Prosser & Son, 26 Platt St., N. Y.  
Rogers, Brown & Co., Cincinnati, O.  
Frank Samuel, Harrison Bldg., Philadelphia, Pa.  
Scully Steel & Iron Co., 69 No. Halsted St., Chicago, Ill.  
Wheelock, Lovejoy & Co., 23 Cliff St., New York.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.
- Impregnating Apparatus**—  
(See Drying and Impregnating Apparatus.)
- Incandescent Lamps**—  
(See Lamps, Incandescent.)
- Inclinometers**—  
L. S. Starrett Co., Athol, Mass.
- Index Plates For Gear Cutting**—  
Brown & Sharpe Mfg. Co., Providence, R. I.
- Index Plates For Milling Machines**—  
Brown & Sharpe Mfg. Co., Providence, R. I.
- Indexing Heads**—  
(See Heads, Indexing and Dividing.)
- Indian Clubs**—  
(See Clubs, Indian.)
- Indicator Posts for Valves**—  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.
- Indicators, Ammonia**—  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Indicators, Center**—  
J. T. Slocumb Co., Providence, R. I.
- Indicators for Machine Testing**—  
Brown & Sharpe Mfg. Co., Providence, R. I.  
L. S. Starrett Co., Athol, Mass.
- Indicators, Gas Engine**—  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
Ashcroft Mfg. Co., 85 Liberty St., N. Y.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.
- Indicators, Hydraulic**—  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Indicators, Number**—  
(See Counting Machines.)
- Indicators, Speed**—  
American Steam Gauge & Valve Co., Boston, Mass.  
Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.  
Edward Brown & Son, 311½ Walnut St., Philadelphia, Pa.  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
Henry Disston & Sons, Philadelphia, Pa.  
W. N. Durant Co., Milwaukee, Wis.  
Schuchardt & Schutte, 90 West St., N. Y.  
Simonds Mfg. Co., Fitchburg, Mass.  
L. S. Starrett Co., Athol, Mass.  
Veeder Mfg. Co., Hartford, Ct.  
R. Woodman Mfg. & Supply Co., Boston.  
Zucker & Levett & Loeb Co., 526-530 W. 25th St., New York.
- Indicators, Speed Recording**—  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
Edward Brown & Son, 311½ Walnut St., Philadelphia, Pa.  
W. N. Durant Co., Milwaukee, Wis.
- Indicators, Steam Engine**—  
American Steam Gauge & Valve Co., Boston, Mass.  
Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.  
Ashton Valve Co., Boston, Mass.  
Crosby Steam Gauge & Valve Co., Boston.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.
- Industrial Railway Equipment**—  
(See Railways for Industrial Purposes.)
- Ingot Extractors**—  
United Engineering & Foundry Co., Pittsburgh, Pa.

**Ingot, Bronze—**  
Paul S. Reeves & Son, 1415 Catharine St., Philadelphia, Pa.  
**Riverside Metal Co.,** Riverside, N. J.

**Ingot, Manganese Bronze—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Paul S. Reeves & Son, Philadelphia, Pa.  
**Riverside Metal Co.,** Riverside, N. J.

**Ingot, Phosphor Bronze—**  
Phosphor-Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.  
Paul S. Reeves & Son, Philadelphia, Pa.  
**Riverside Metal Co.,** Riverside, N. J.

**Ingot, Steel—**  
Andrews Steel Co., Newport, Ky.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Thomas Frosser & Son, 26 Platt St., N. Y.

**Injector, Boiler—**  
Eymon-Evans Mfg. Co., 1507 Clearfield St., Philadelphia, Pa.  
Hancock Inspirator Co., 85-89 Liberty St., New York.  
Hayden & Derby Mfg. Co., 85-89 Liberty St., New York.  
Jenkins Bros., 71 John St., New York.  
Lunkenheimer Co., Cincinnati, O.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Wm. Powell Co., Cincinnati, O.

**Inks, Drawing—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Inkstands—**  
(See Stationers' Hardware.)

**Inkstands, Silver Plated—**  
(See Ink, Specialties.)

**Insect Powder Guns—**  
(See Guns, Insect Powder.)

**Inspectors' Scales, Leather—**  
(See Scales, Leather Inspectors.)

**Inspirators—**  
(See Injectors, Boiler.)

**Instruments, Drawing—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
L. S. Starrett Co., Athol, Mass.

**Instruments, Electric Testing—**  
Fort Wayne Electric Works, Fort Wayne, Ind.  
General Electric Co., Schenectady, N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Instruments, Engineers—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Instruments, Forestry—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Instruments, Leveling and Squaring—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
L. S. Starrett Co., Athol, Mass.

**Instruments, Mathematical—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Instruments, Nautical—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.

**Instruments, Surveying—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Insulating Machinery for Wire—**  
Farrel Foundry & Mach. Co., Ansonia, Ct.

**Insulating Materials—**  
Samuel Cabot, Boston, Mass.

**Insulating Supplies, Electrical—**  
General Electric Co., Schenectady, N. Y.

**Insulators, Electric—**  
Boston & Lockport Block Co., East Boston, Mass.  
Stanley G. Flagg & Co., 424 No. 19th St., Philadelphia, Pa.

**Insulators, Expansion—**  
(See Pins, Insulator Expansion.)

**Insulators, Trolley—**  
Billings & Spencer Co., Hartford, Ct.  
General Electric Co., Schenectady, N. Y.

**Intensifiers, Steam, Hydraulic—**  
Chambersburg Engineering Co., Chambersburg, Pa.  
Mesta Machine Co., Pittsburgh, Pa.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Intercoolers, Air—**  
American Well Works, Aurora, Ill.  
Ingersoll-Rand Co., 11 Broadway, New York.

**Interfering Boots—**  
(See Boots, Interfering.)

**Involute Wrenches—**  
(See Wrenches, Pipe.)

**Iron and Brass Studs—**  
(See Studs, Brass and Iron.)

**Iron and Steel, Brokers and Merchants—**  
Birdsboro Iron & Steel Breaking Co., Ltd., Birdsboro, Pa.  
Reed F. Blair & Co., Pittsburgh, Pa.  
M. J. & M. Blake, 97 10th Ave., N. Y.  
Bourne-Fuller Co., Cleveland, O.  
Chicago House Wrecking Co., 35th and Iron Sts., Chicago, Ill.  
R. M. Cunliffe, 11th St. and Washington Ave., Philadelphia, Pa.  
Dallett & Co., Harrison Bldg., Philadelphia, Pa.  
Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.  
J. K. Dimmick & Co., 2023 New Land Title Bldg., Philadelphia, Pa.  
Eagle Metal & Supply Co., Brooklyn, N. Y.  
Arthur C. Harvey Co., Boston, Mass.  
C. B. Houston & Co., Girard Trust Bldg., Philadelphia, Pa.  
Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.  
H. M. Jones & Co., Inc., Boston, Mass.  
Jerome Keeley & Co., 421 Chestnut St., Philadelphia, Pa.  
Ernest Law & Co., 15th and Market Sts., Philadelphia, Pa.  
J. Tatnall Lea & Co., 19 So. 12th St., Philadelphia, Pa.  
John Leonard & Co., 220 Broadway, N. Y.  
Henry Lewis & Co., 26 So. 15th St., Philadelphia, Pa.  
Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.  
Merchant & Evans Co., 517 Arch St., Philadelphia, Pa.  
A. Milne & Co., 1 Broadway, New York.  
J. J. Mohr, 131 So. 4th St., Philadelphia.  
Edgar M. Moore & Co., Pittsburgh, Pa.  
Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.  
North Works, Illinois Steel Co., Chicago, Ill.



Oyden & Wallace, 577 Greenwich St., N. Y.  
 Samuel Osborn & Co., Boston, Mass.  
 Patriarche & Bell, 215 Pearl St., N. Y.  
 F. R. Phillips & Sons Co., Pennsylvania  
 Bldg., Philadelphia, Pa.

Pierson & Co., 29 Broadway, N. Y.  
 Pilling & Crane, Girard Bldg., Philadel-  
 phia, Pa.

Horace T. Potts & Co., 316-320 No. 3d St.,  
 Philadelphia, Pa.

Potts & Wittman, North American Bldg.,  
 Philadelphia, Pa.

Thos. Prosser & Son, 26 Platt St., N. Y.  
 Joseph T. Ryerson & Son, 18-22 Mil-  
 waukee Ave., Chicago, Ill.

Frank Samuel, 15th and Market Sts.,  
 Philadelphia, Pa.

Scully Steel & Iron Co., 69 N. Halsted  
 St., Chicago, Ill.

Shook & Fletcher, Birmingham, Ala.  
 Morton B. Smith Co., 243 Front St., N. Y.

W. P. Snyder & Co., Pittsburgh, Pa.  
 Charles G. Stevens Co., 60 S. Canal St.,  
 Chicago, Ill.

C. Tennant Sons & Co., 76 William St.,  
 New York.

Waite, Ranlet & Co., Boston, Mass.  
 Walsh's Sons & Co., Newark, N. J.

William B. Walter & Co., Marquette  
 Bldg., Chicago, Ill.

S. & C. Wardlow, 278 Pearl St., N. Y.  
 Wheeler, Miffin & Co., Fidelity Bldg.,  
 Philadelphia, Pa.

Wheelock, Lovejoy & Co., 23 Cliff St.,  
 New York.

E. H. Wilson & Co., 112 No. Broad St.,  
 Philadelphia, Pa.

L. & R. Wister & Co., Bullitt Bldg.,  
 Philadelphia, Pa.

Woodward, Wight & Co., Ltd., New  
 Orleans, La.

**Iron and Steel, Hexagon—**  
 Bethlehem Steel Co., So. Bethlehem, Pa.

Highland Iron & Steel Co., Terre Haute,  
 Ind.

Lockhart Iron & Steel Co., Pittsburgh.  
 Thomas Prosser & Son, 26 Platt St., N. Y.

**Iron and Steel Stairs—**  
 (See Stairs, Iron and Steel.)

**Iron and Steel, Swedish—**  
 MERCHANTS.

Bourne-Fuller Co., Cleveland, O.  
 Dilworth, Gilbert & Towne, Inc., 35-37  
 Wooster St., New York.

Arthur C. Harvey Co., Boston, Mass.

A. Milne & Co., 1 Broadway, New York-  
 Geo. Nash Co., 115 Washington Boule-  
 vard, Chicago, Ill.

Pierson & Co., 23 Broadway, New York.  
 Horace T. Potts & Co., 316-320 No. 3d St.,  
 Philadelphia, Pa.

Scully Steel & Iron Co., 69 N. Halsted  
 St., Chicago, Ill.

Charles G. Stevens Co., 60 S. Canal St.,  
 Chicago, Ill.

Wheelock, Lovejoy & Co., 23 Cliff St.,  
 New York.

J. Wilkes Co., 135 William St., N. Y.  
 Woodward, Wight & Co., Ltd., New  
 Orleans, La.

**Iron and Steel Wire—**  
 (See Wire, Iron and Steel, Market, Fence,  
 Stone, &c.)

**n. Axle—**  
 Jones & Co., Inc., Boston, Mass.

### Iron, Bar—

American Iron & Steel Mfg. Co., Leba-  
 non, Pa.

Bethlehem Steel Co., So. Bethlehem, Pa.  
 Highland Iron & Steel Co., Terre Haute,  
 Ind.

Interstate Iron & Steel Co., First Na-  
 tional Bank Bldg., Chicago, Ill.

Nicetown Plate Washer Co., 1822-1850 W.  
 Juniata St., Philadelphia, Pa.

Pittsburgh Forge & Iron Co., Pittsburgh,  
 Pa.

**Iron Bars, Boiler Staybolt—**  
 Falls Hollow Staybolt Co., Cuyahoga  
 Falls, O.

**Iron Bars, Cold Rolled**  
**Sheet, Corrugated, &c.—**  
 (See Bars, Corrugated, &c.)

**Iron Bedsteads, Lamps, &c.—**  
 (See Bedsteads, Lamps, &c.)

**Iron, Boiler Brace—**  
 American Iron & Steel Mfg. Co., Leba-  
 non, Pa.

Bethlehem Steel Co., So. Bethlehem, Pa.  
 B. M. Jones & Co., Inc., Boston, Mass.

Lockhart Iron & Steel Co., Pittsburgh, Pa.

**Iron, Brass and Bronze, Orna-**  
**mental (Grilles, Gates,**  
**Creastings, Finials, Win-**  
**dow Guards, Vanes, Wick-**  
**ets, Doors, Partitions,**  
**&c.)—**

Anchor Post Iron Works, 27 Cortlandt  
 St., New York.

Belmont Iron Works, Inc., Philadelphia.  
 Bethlehem Foundry & Machine Co., So.  
 Bethlehem, Pa.

Buffalo Wire Works Co., Buffalo, N. Y.  
 Chattanooga Roofing & Foundry Co.,  
 Chattanooga, Tenn.

Chicago Hardware Foundry Co., North  
 Chicago, Ill.

Clinton Wire Cloth Co., Clinton, Mass.  
 Dufur & Co., Baltimore, Md.

Enterprise Foundry & Fence Co., Indian-  
 apolis, Ind.

Estey Wire Works Co., 59 Fulton St.,  
 New York.

Forest City Steel & Iron Co., Cleveland.  
 Gilbert & Bennett Mfg. Co., 277 Broad-  
 way, New York.

Glen Mfg. Co., Ellwood City, Pa.  
 Howard & Morse, 45 Fulton St., N. Y.

Mathew Lanz & Sons, Pittsburgh, Pa.  
 Ludlow-Saylor Wire Co., St. Louis, Mo.

Fred J. Meyers Mfg. Co., Hamilton, O.  
 Philadelphia Steel & Wire Co., 325 Com-  
 merce St., Philadelphia, Pa.

Standard Wire Co., New Castle, Pa.  
 Stewart Iron Works Co., Cincinnati, O.

E. H. Titchener & Co., Binghamton, N. Y.  
 W. S. Tyler Co., Cleveland, O.

Van Dorn Iron Works Co., Cleveland, O.  
 Wright Wire Co., Worcester, Mass.

**Iron Ceiling and Siding—**  
 (See Ceiling and Siding, Iron and Steel.)

**Iron, Chain—**  
 Bethlehem Steel Co., So. Bethlehem, Pa.

**Iron Faucets—**  
 (See Faucets, Iron.)

**Iron Fence—**  
 (See Fencing, Gates, &c.)

**Iron, Horseshoe—**  
 Bethlehem Steel Co., So. Bethlehem, Pa.

Lockhart Iron & Steel Co., Pittsburgh, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.

**Iron Levels—**  
(See Levels, Iron, also Plumbs and Levels.)

**Iron Line Wire, Weather-proof—**  
(See Wire, Electrical.)

**Iron, Pig—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Columbus Iron & Steel Co., Columbus, O.  
Pilling & Crane, Girard Bldg., Philadelphia, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Tennessee Coal, Iron & Railroad Co., 71 Broadway, New York.  
Upson Nut Co., Cleveland, O.  
Youngstown Sheet & Tube Co., Youngstown, O.

**MERCHANTS.**  
Reed F. Blair & Co., Pittsburgh, Pa.  
Bourne-Fuller Co., Cleveland, O.  
J. K. Dimmick & Co., 2023 New Land Title Bldg., Philadelphia, Pa.  
Hickman, Williams & Co., Chicago, Ill.  
J. H. Hillman & Son, Pittsburgh, Pa.  
C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.  
Jerome Keeley & Co., 421 Chestnut St., Philadelphia, Pa.  
Ernest Law & Co., 15th & Market Sts., Philadelphia, Pa.  
J. Tatnall Lea & Co., 19 So. 12th St., Philadelphia, Pa.  
J. J. Mohr, 131 S. 4th St., Philadelphia.  
Edgar M. Moore & Co., Pittsburgh, Pa.  
Edmund W. Mudge & Co., Pittsburgh, Pa.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Rogers, Brown & Co., Cincinnati, O.  
Frank Samuel, 15th & Market Sts., Philadelphia, Pa.  
W. P. Snyder & Co., Pittsburgh, Pa.  
Wheeler, Miffin & Co., Fidelity Bldg., Philadelphia, Pa.  
E. H. Wilson & Co., 112 No. Broad St., Philadelphia, Pa.  
L. & R. Wister & Co., Bullitt Bldg., Philadelphia, Pa.

**Iron, Pig, Basic—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
La Belle Iron Works, Steubenville, O.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**Iron, Pig, Charcoal—**  
Columbus Iron & Steel Co., Columbus, O.  
Superior Charcoal Iron Co., Grand Rapids, Mich.

**MERCHANTS.**  
J. K. Dimmick & Co., 2023 New Land Title Bldg., Philadelphia, Pa.  
J. H. Hillman & Son, Pittsburgh, Pa.  
J. J. Mohr, Bullitt Bldg., Philadelphia.  
Horace T. Potts & Co., 316-320 N. 3d St., Philadelphia, Pa.  
Rogers, Brown & Co., Cincinnati, O.  
Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.

**Iron, Refined—**  
Lockhart Iron & Steel Co., Pittsburgh, Pa.

**Iron, Rivet and Stay Bolt—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Bethlehem Steel Co., So. Bethlehem, Pa.  
Burden Iron Co., Troy, N. Y.  
Falls Hollow Staybolt Co., Cuyahoga Falls, O.

Highland Iron & Steel Co., Terre Haute, Ind.

Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.  
B. M. Jones & Co., Inc., Boston, Mass.  
Lockhart Iron & Steel Co., Pittsburgh, Pa.  
Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.

**MERCHANTS.**  
Bourne-Fuller Co., Cleveland, O.  
Arthur C. Harvey Co., Boston, Mass.  
C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.  
Horace T. Potts & Co., 316-320 N. 3d St., Philadelphia, Pa.  
Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

**Iron Roofing, Rosettes—**  
(See Roofing, Rosettes.)

**Iron, Spindle—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

**Iron, Stud and Engine Bolt—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Lockhart Iron & Steel Co., Pittsburgh, Pa.

**Iron, Wagon Box—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.

**Iron, Welding—**  
(See Welding, Iron and Steel, Thermit Process.)

**Iron Wood Screws—**  
(See Screws, Wood.)

**Iron Work, Builders' (Veranda Columns, Post Caps and Sockets, Ornamental, Porticoes, Coal Holes and Covers, Manhole Cistern Covers, Sidewalk Lights, Area Gratings, Foundation Gratings, Sewer Gratings, Ash Pit Doors and Frames, Ventilating Plates, Sash, Canopies, Balconies, Area Railings, Gutter Crossings, Foundation Washers, Brackets, Plates, &c.)—**

Anchor Post Iron Works, 27 Cortlandt St., New York.  
Barbour-Stockwell Co., Cambridgeport, Mass.  
Belmont Iron Works, Inc., Philadelphia.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Ruell & Mitchell, 120 Liberty St., N. Y.  
Buffalo Foundry & Machine Co., Buffalo, N. Y.  
Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.  
Chattanooga Car & Foundry Co., Chattanooga, Tenn.  
S. Cheney & Son, Manlius, N. Y.  
Dufur & Co., Baltimore, Md.  
A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.  
Forest City Steel & Iron Co., Cleveland, O.

Glen Mfg. Co., Ellwood City, Pa.  
 G. Haarmann & Son, Holyoke, Mass.  
 Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
 Hess-Snyder Co., Massillon, O.  
 Hilles & Jones Co., Wilmington, Del.  
 Humphrey Machine Co., Keene, N. H.  
 Keystone Steel Co., Wilmington, Del.  
 W. N. Kratzer & Co., Pittsburgh, Pa.  
 Matthew Lanz & Sons, Pittsburgh, Pa.  
 Lebanon Steel Casting Co., Lebanon, Pa.  
 Lynchburg Foundry Co., Lynchburg, Va.  
 Fred J. Meyers Mfg. Co., Hamilton, O.  
 National Iron & Wire Co., Cleveland, O.  
 St. Louis Car Wheel Co., St. Louis, Mo.  
 Stewart Iron Works Co., Cincinnati, O.  
 W. S. Tyler Co., Cleveland, O.  
 United States Cast Iron Pipe & Foundry Co., 71 Broadway, New York.  
 Van Dorn Iron Works Co., Cleveland, O.  
 Western Foundry & Sash Weight Co., 2d and Miller Sts., St. Louis, Mo.  
 Wheeling Mold & Foundry Co., Wheeling, W. Va.  
 R. W. Whitehurst Co., Norfolk, Va.  
 Wright Wire Co., Worcester, Mass.

**Irons, Angle—**  
 H. E. Hessler Co., Syracuse, N. Y.

**Irons, Balling—**  
 Covert Mfg. Co., Troy, N. Y.

**Irons, Barge—**  
 Oliver Iron & Steel Co., Pittsburgh, Pa.

**Irons, Burnishing—**  
 Dame, Stoddard & Co., Boston, Mass.

**Irons, Calking—**  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
 L. & I. J. White Co., Buffalo, N. Y.

**Irons, Canopy Top, Carriage—**  
 E. D. Clapp Mfg. Co., Auburn, N. Y.

**Irons, Corner and Brace—**  
 Griffin Mfg. Co., Erie, Pa.  
 National Mfg. Co., Sterling, Ill.  
 Richards Mfg. Co., Aurora, Ill.  
 Stanley Works, New Britain, Ct.  
 W. & J. Tiebout, 118 Chambers St., N. Y.

**Irons, Derrick—**  
 W. W. Patterson Co., Pittsburgh, Pa.

**Irons, Door Bar—**  
 Richards Mfg. Co., Aurora, Ill.

**Irons, Gear, Carriage and Wagon—**  
 E. D. Clapp Mfg. Co., Auburn, N. Y.  
 Kilborn & Bishop Co., New Haven, Ct.

**Irons, Golf—**  
 Kilborn & Bishop Co., New Haven, Ct.  
 Page-Storms Drop Forge Co., Chicopee, Mass.

**Irons, Grappling—**  
 W. & J. Tiebout, 118 Chambers St., N. Y.

**Irons, Laundry, Tailor, &c., Electric—**  
 W. N. Durant Co., Milwaukee, Wis.

**Irons, Measuring, Ice—**  
 (See Ice Harvesting Tools.)

**Irons, Neck Yoke—**  
 Oliver Iron & Steel Co., Pittsburgh, Pa.

**Irons, Pinching—**  
 Arcade Mfg. Co., Freeport, Ill.

**Irons, Plane —**  
 Ruck Bros., Millbury, Mass.  
 Chapin-Stephens Co., Pine Meadow, Ct.  
 Stanley Rule & Level Co., New Britain, Ct.  
 L. & I. J. White Co., Buffalo, N. Y.

**Irons, Porch Post—**  
 (See Supports, Porch.)

**Irons, Rack, Wagon—**  
 Louden Machinery Co., Fairfield, Ia.

**Irons, Rub, Wagon—**  
 Oliver Iron & Steel Co., Pittsburgh, Pa.

**Irons, Sad, Laundry, &c., Enterprise Mfg. Co., of Pa., Philadelphia, Pa.**  
 Wrightsville Hardware Co., Wrightsville, Pa.  
 (See also Irons, Laundry, Tailor, &c., Electric.)

**Irons, Sash Cord and Sash Weight—**  
 H. B. Ives Co., New Haven, Ct.  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 Wire Goods Co., Worcester, Mass.

**Irons, Soldering—**  
 (See Coppers, Soldering.)

**Irons, Stanchion—**  
 S. Cheney & Son, Manlius, N. Y.

**Irons, Timbale—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Wrightsville Hardware Co., Wrightsville, Pa.

**Irons, Tuyere—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Heath Foundry & Mfg. Co., Plymouth, O.  
 J. W. Paxson Co., Philadelphia, Pa.  
 Silver Mfg. Co., Salem, O.  
 Whiting Foundry Equipment Co., Harvey, Ill.  
 Wrightsville Hardware Co., Wrightsville, Pa.

**Irons, Waffle—**  
 Reading Hardware Co., Reading, Pa.  
 Stuart & Peterson Co., Burlington, N. J.  
 Wrightsville Hardware Co., Wrightsville, Pa.

**Irons, Waving, Hair—**  
 Arcade Mfg. Co., Freeport, Ill.

**Irons, Whiffetree End—**  
 Oliver Iron & Steel Co., Pittsburgh, Pa.

**Irrigation Pumps—**  
 (See Pumps, Irrigation.)

**Ivory Rules—**  
 (See Rules, Ivory.)

**Jack Chain, Stones—**  
 (See Chain, Stones.)

**Jacket Pumps—**  
 (See Pumps, Jacket.)

**Jacks, Automobile—**  
 Chicago Steel Foundry Co., The Rookery, Chicago, Ill.  
 Covert Mfg. Co., Troy, N. Y.  
 Duff Mfg. Co., Pittsburgh, Pa.

**Jacks, Ball Bearing Screw—**  
 Duff Mfg. Co., Pittsburgh, Pa.

**Jacks, Boot—**  
 Columbia Grey Iron Co., Columbia, Pa.  
 Heath Foundry & Mfg. Co., Plymouth, O.  
 Reading Hardware Co., Reading, Pa.  
 Louis Sacks, Newark, N. J.  
 Susquehanna Casting Co., Wrightsville, Pa.

**Jacks, Carriage and Wagon—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Bicycle Stepladder Co., 65 Randolph St., Chicago, Ill.  
 Boston & Lockport Block Co., East Boston, Mass.

**Chicago Steel Foundry Co., The Rookery,**  
Chicago, Ill.

**Covert Mfg. Co., Troy, N. Y.**  
**Fernald Mfg. Co., North East, Pa.**  
**Lane Bros. Co., Poughkeepsie, N. Y.**  
**Millers Falls Co., 28 Warren St., N. Y.**  
**F. E. Myers & Bro., Ashland, O.**  
**Richards Mfg. Co., Aurora, Ill.**  
**R. W. Whitehurst Co., Norfolk, Va.**

**Jacks, Hydraulic—**  
**Bethlehem Foundry & Machine Co.,**  
South Bethlehem, Pa.

**Dienelt & Eisenhardt, Inc., 1308 Howard**  
St., Philadelphia, Pa.

**Richard Dudgeon, 24 Columbia St., N. Y.**  
**Duff Mfg. Co., Pittsburgh, Pa.**

**Charles F. Elmes Engineering Co., 253-**  
259 Fulton St., Chicago, Ill.

**A. L. Henderer's Sons, Wilmington, Del.**  
**Irving Mfg. & Tool Co., 157 Chambers**  
St., New York.

**Manning, Maxwell & Moore, Inc., 85 Lib-**  
erty St., New York.

**Watson-Stillman Co., 50 Church St., N. Y.**  
**Jacks, Hydraulic, Universal—**

**Richard Dudgeon, 24-26 Columbia St.,**  
New York.

**Jacks, Ladder—**  
**Bettcher Mfg. Co., Cleveland, O.**  
**Richards Mfg. Co., Aurora, Ill.**

**Jacks, Lifting—**  
**F. E. Myers & Bro., Ashland, O.**  
**F. R. Patch Mfg. Co., Rutland, Vt.**

**Jacks, Logging—**  
**Duff Mfg. Co., Pittsburgh, Pa.**  
**Jeffrey Mfg. Co., Columbus, O.**

**Wickes Bros., Saginaw, Mich.**  
**Jacks, Machinists—**

**Bethlehem Foundry & Machine Co., So.**  
Bethlehem, Pa.

**Chicago Steel Foundry Co., The Rookery,**  
Chicago, Ill.

**Jacks, Pipe Forcing—**  
**Duff Mfg. Co., Pittsburgh, Pa.**

**Jacks, Planer—**  
**Armstrong Bros. Tool Co., 109 N. Fran-**  
cisco Ave., Chicago, Ill.

**Western Tool & Mfg. Co., Springfield, O.**  
**Jacks, Pneumatic—**

**Chicago Pneumatic Tool Co., Fisher**  
Bldg., Chicago, Ill.

**Jacks, Pumping—**  
**American Well Works, Aurora, Ill.**  
**Hayes Pump & Planter Co., Galva, Ill.**

**F. E. Myers & Bro., Ashland, O.**  
**Jacks, Railroad—**

**Chicago Steel Foundry Co., The Rookery,**  
Chicago, Ill.

**Richard Dudgeon, 24-26 Columbia St.,**  
New York.

**Duff Mfg. Co., Pittsburgh, Pa.**  
**A. L. Henderer's Sons, Wilmington, Del.**

**Jacks, Reel—**  
**Duff Mfg. Co., Pittsburgh, Pa.**  
**Mathias Klein & Sons, 87-89 W. Van**  
Buren St., Chicago, Ill.

**Jacks, Roller—**  
(See Dollies, Timber.)

**Jacks, Screw—**  
**Covert Mfg. Co., Troy, N. Y.**  
**Duff Mfg. Co., Pittsburgh, Pa.**  
**Irving Mfg. & Tool Co., 157 Chambers**  
St., New York.

**Manning, Maxwell & Moore, Inc., 85 Lib-**  
erty St., New York.

**Millers Falls Co., 28 Warren St., N. Y.**  
**Pacific Iron Works, Bridgeport, Ct.**

**Screw Cutting Co. of America, 150 Berk-**  
ley St., Philadelphia, Pa.

**L. S. Starrett Co., Athol, Mass.**  
**Watson-Stillman Co., 50 Church St., N. Y.**

**Jacks, Stone—**  
**Duff Mfg. Co., Pittsburgh, Pa.**

**Jacks, Timber—**  
(See Timber Dollies.)

**Jacks, Track—**  
(See Jacks, Railroad.)

**Jacks, Traversing—**  
**Duff Mfg. Co., Pittsburgh, Pa.**

**Jail Cells, Wire—**  
**Buffalo Wire Works Co., Inc., Buffalo,**  
N. Y.

**Jails, Jail Cells, &c.—**  
**Glen Mfg. Co., Ellwood City, Pa.**  
**National Iron & Wire Co., Cleveland, O.**  
**Stewart Iron Works Co., Cincinnati, O.**  
**Van Dorn Iron Works Co., Cleveland, O.**

**Jamb Hooks—**  
(See Hooks, Jamb.)

**Japanning—**  
**Bossert Electric Construction Co., Utica,**  
N. Y.

**S. Cheney & Son, Manlius, N. Y.**  
**Forest City Foundry & Mfg. Co., Cleve-**  
land, O.

**Gunder, Paeschke & Frey Co., Milwau-**  
kee, Wis.

**Haven Malleable Castings Co., Cincin-**  
nati, O.

**Hopson & Chapin Mfg. Co., New London,**  
Ct.

**Hubley Mfg. Co., Lancaster, Pa.**  
**H. B. Ives Co., New Haven, Ct.**

**Falmers & De Mooy Foundry Co., Cleve-**  
land, O.

**Parker Wire Goods Co., Worcester, Mass.**  
**I. S. Spencer's Sons, Guilford, Ct.**

**Taylor & Boggis Foundry Co., Cleveland,**  
**Wright Wire Co., Worcester, Mass.**

**Jar Molds—**  
(See Molds, Jar and Bottle.)

**Jaw Caps, Vise—**  
(See Vise Jaw Caps.)

**Jaw Clutches—**  
(See Clutches, Jaw.)

**Jaws, Face Plate—**  
**Cushman Chuck Co., Hartford, Ct.**  
**Hoggson & Pettis Mfg. Co., New Haven,**  
Ct.

**Oneida National Chuck Co., Oneida, N. Y.**  
**Skinner Chuck Co., New Britain, Ct.**  
**Union Mfg. Co., New Britain, Ct.**

**Jaws, Vise—**  
**Prentiss Vise Co., 44 Barclay St., N. Y.**

**Jaws, Wrench—**  
**Bergman Tool Mfg. Co., Buffalo, N. Y.**

**Jewel Caskets, Silver and**  
**Silver Plated—**  
**International Silver Co., Meriden, Ct.**

**Jewelers' Rolls, Saws,**  
**Tools—** (See Rolls, Saws, Tools.)

**Jingle Bells—**  
(See Bells, House, on Carriage.)

**Jobbers, Bicycle Material**  
**and Sundries—**  
**John S. Leng's Son & Co., 33 Murray St.,**  
New York.

**Jobbers, Hardware, Cutlery, Tools, Sporting Goods, &c.**

C. H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.  
 Burditt & Williams Co., Boston, Mass.  
 Butler Bros., Randolph Bridge, Chicago, Chicago House Wrecking Co., W. 35th & Iron Sts., Chicago, Ill.  
 Dame, Stoddard & Co., Boston, Mass.  
 Hibbard, Spencer, Bartlett & Co., State St. Bridge, Chicago, Ill.  
 Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.  
 John S. Leng's Son & Co., 33 Murray St., New York.  
 Norvell-Shapleigh Hardware Co., St. Louis, Mo.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 Supplee Hardware Co., Market and 5th Sts., Philadelphia, Pa.  
 Woodward, Wight & Co., Ltd., New Orleans, La.

**Joint Couplings—**

(See Couplings, Joint.)

**Jointer Gauges—**

(See Gauges, Jointer.)

**Jointers, Saw—**

Crescent Machine Co., Leetonia, O.  
 Oliver Machinery Co., Grand Rapids, Mich.

Pike Mfg. Co., Pike, N. H.  
 Silver Mfg. Co., Salem, O.

**Jointers, Tucking—**

L. & I. J. White Co., Buffalo, N. Y.  
**Joints, Automobile Slip—**

(See Automobile Slip Joints.)

**Joints, Expansion, Pipe—**

Alberger Condenser Co., 95 Liberty St., New York.  
 American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

Lunkenheimer Co., Cincinnati, O.  
 National Tube Co., Pittsburgh, Pa.

Wm. Powell Co., Cincinnati, O.  
 Power Specialty Co., 111 Broadway, N. Y.

Whitlock Coil Pipe Co., Hartford, Ct.

**Joints, Rail—**

Goldschmidt Thermit Co., 90 West St., New York.

Arthur Koppel Co., Pittsburgh, Pa.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Joints, Step Ladder—**

Stanley Works, New Britain, Ct.

**Joints, Stump—**

E. D. Clapp Mfg. Co., Auburn, N. Y.

**Joints, Universal—**

Bausch Machine Tool Co., Brightwood, Mass.

Boston Gear Works, Norfolk Downs, Mass.

Cambria Forge Co., Johnstown, Pa.

Eynon-Evans Mfg. Co., 1507 Clearfield St., Philadelphia, Pa.

Gem Mfg. Co., Pittsburgh, Pa.

Gould & Eberhardt, Newark, N. J.

Poole Engineering & Machine Co., Baltimore, Md.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

**Joint Hangers—**

(See Hangers and Stirrups.)

**Juice Extractors—**

(See Extractors, Juice.)

**Jumping Ropes—**

(See Ropes, Jumping.)

**Kaolin—**

J. W. Paxson Co., Philadelphia, Pa.

**Keelers—**

Richmond Cedar Works, Richmond, Va.

**Keg Machinery and Tools—**

Peter Gerlach Co., Cleveland, O.

**Keg Machinery, Sheet****Metal—**

E. W. Bliss Co., Brooklyn, N. Y.

**Kegs, Factory—**

W. J. Clark Co., Salem, O.

**Kegs, Harvest—**

American Woodenware Mfg. Co., Toledo, O.

**Kegs, Nail, Bolt, Nut, &c.—**

W. J. Clark Co., Salem, O.

**Kegs, Oak—**

American Woodenware Mfg. Co., Toledo, O.

Richmond Cedar Works, Richmond, Va.

**Kegs, Pickle—**

American Woodenware Mfg. Co., Toledo, O.

**Kerosene Burners**

(See Burners, Kerosene.)

**Kettles, Cauldron—**

S. Cheney & Son, Manlius, N. Y.

**Kettles, Dip and Pouring—**

American Welding Co., Carbondale, Pa.

**Kettles, Five o'Clock Tea—**

New York Stamping Co., Brooklyn, N. Y.

Goodwin & Kintz Co., Winsted, Ct.

**Kettles, Galvanizing—**

American Welding Co., Carbondale, Pa.

Warren City Tank & Boiler Co., Warren, O.

**Kettles, Maslin—**

Avery Stamping Co., Cleveland, O.

Stuart & Peterson Co., Burlington, N. J.

**Kettles, Mixing—**

E. B. Badger & Sons Co., Boston, Mass.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

**Kettles on Wheels—**

American Welding Co., Carbondale, Pa.

Stuart & Peterson Co., Burlington, N. J.

**Kettles, Pitch—**

F. H. Evans, Brooklyn, N. Y.

Stuart & Peterson Co., Burlington, N. J.

**Kettles, Plate Steel—**

W. J. Clark Co., Salem, O.

**Kettles, Pouring—**

(See Kettles, Dip and Pouring.)

**Kettles, Roofing—**

F. H. Evans, Brooklyn, N. Y.

**Kettles, Soda and Potash—**

American Welding Co., Carbondale, Pa.

Brown & Sharpe Mfg. Co., Providence, R. I.

**Hess-Snyder Co., Massillon, O.**

Manufacturing Equipment & Engineering

Co., Boston, Mass.

Pennsylvania Engineering Works, New

Castle, Pa.

Philadelphia Roll & Machine Co., 23d St.

& Washington Ave., Philadelphia, Pa.

**Kettles, Steam Jacket—**

E. B. Badger & Sons Co., Boston, Mass.

E. Keeler Co., Williamsport, Pa.

R. Munroe & Sons Mfg. Corporation,  
Pittsburgh, Pa.

Petroleum Iron Works Co., Sharon, Pa.  
Stuart & Peterson Co., Burlington, N. J.

**Kettles, Steaming—**

W. J. Clark Co., Salem, O.

**Kettles, Sugar—**

American Welding Co., Carbondale, Pa.

Philadelphia Roll & Machine Co., 23d St.

& Washington Ave., Philadelphia, Pa.

**Kettles, Sugar, Cast Iron—**

Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.

**Kettles, Tar—**

Thomas Carlin's Sons Co., N. S. Pitts-

burgh, Pa.

F. H. Evans, Brooklyn, N. Y.

E. Keeler Co., Williamsport, Pa.

Manning, Maxwell & Moore, Inc., 85 Lib-

erty St., New York.

Riter-Conley Mfg. Co., Pittsburgh, Pa.

**Kettles, Tea, Range and**

**Stove—**

Avery Stamping Co., Cleveland, O.

Cleveland Stamping & Tool Co., Cleve-

land, O.

Dover Stamping & Mfg. Co., Cambridge,

Mass.

**Kettles, Tin Melting, Weld-**

**ed—**

American Welding Co., Carbondale, Pa.

**Kettles, Wash—**

W. J. Clark Co., Salem, O.

**Key Chains, &c.—**

(See Chains, &c.)

**Key Seaters, Portable—**

John T. Burr & Son, Brooklyn, N. Y.

Rockford Drilling Machine Co., Rockford,

Ill.

**Key Way Machines—**

John T. Burr & Sons, Brooklyn, N. Y.

W. P. Davis Machine Co., Rochester,

N. Y.

Lapointe Machine Tool Co., Hudson,

Mass.

Morse Twist Drill & Machine Co., New

Bedford, Mass.

Morton Mfg. Co., Muskegon Heights,

Mich.

Niles-Bement-Pond Co., 111 Broadway,

New York.

Screw Cutting Co. of America, 150 Berk-

ley St., Philadelphia, Pa.

Novelty Iron Works, Dubuque, Ia.

MERCHANTS.

Hill, Clarke & Co., Boston, Mass.

Marshall & Huchart Machinery Co., 62-

64 S. Canal St., Chicago, Ill.

Metch & Merryweather Machinery Co.,

Cleveland, O.

Scully Steel & Iron Co., 69 North Hal-

sted St., Chicago, Ill.

Vanduyck, Churchill Co., 8 Dey St., N. Y.

A. D. White Machinery Co., 39-41 S.

Canal St., Chicago, Ill.

C. C. Wormer Machinery Co., Detroit,

Mich.

**Keyhole Saws—**

(See Saws, Compass or Keyhole.)

**Keys and Cotters, Spring—**

(See Cotters and Keys, Spring.)

**Keys and Key Blanks—**

Eagle Lock Co., Terryville, Ct.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette

St., New York.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Keys, Brake Shoe—**

New Castle Forge & Bolt Co., New

Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Keys, Flat Spring—**

Cobb & Drew, Plymouth, Mass.

Hindley Mfg. Co., Valley Falls, R. I.

F. P. Smith & Co., Sharon Hill, Pa.

W. & S. Mfg. Co., Worcester, Mass.

Whitman & Barnes Mfg. Co., Chicago,

Wire Goods Co., Worcester, Mass.

**Keys, Machine—**

Billings & Spencer Co., Hartford, Ct.

Morton Mfg. Co., Muskegon Heights,

Mich.

Pennsylvania Shafting Co., Spring City,

Pa.

Whitney Mfg. Co., Hartford, Ct.

**Keys, Radiator, Air Valve—**

National Tube Co., Pittsburgh, Pa.

**Keys, Riveted, Machine—**

Wm. H. Haskell Mfg. Co., Pawtucket

R. I.

Hindley Mfg. Co., Valley Falls, R. I.

Whitman & Barnes Mfg. Co., Chicago,

**Keys, Shapes for—**

Pennsylvania Shafting Co., Spring City,

Pa.

**Keys, Street Washer—**

National Tube Co., Pittsburgh, Pa.

**Kick Plates—**

(See Plates, Push, Pull, Kick.)

**Killers, Fly—**

Fred J. Meyers Mfg. Co., Hamilton, O.

Parker Wire Goods Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Kilns, Cement—**

S. Freeman & Sons Mfg. Co., Racine,

Wis.

Kiln & Chimney Construction Co., Brook-

lyn, N. Y.

**Kilns, Dry—**

Bayley Mfg. Co., Milwaukee, Wis.

Buffalo Forge Co., Buffalo, N. Y.

Green Fuel Economizer Co., Matteawan,

N. Y.

Kiln & Chimney Construction Co., Brook-

lyn, N. Y.

B. F. Sturtevant Co., Boston, Mass.

**Kilns, Lime—**

Atlas Car & Mfg. Co., Cleveland, O.

Kiln & Chimney Construction Co., Brook-

lyn, N. Y.

Riter-Conley Mfg. Co., Pittsburgh, Pa.

**King Bolts—**

(See Bolts, King.)

**Kitchen Articles, Wire (Egg**

**Boilers, Vegetable Boll-**

**ers, Chain Pot Cleaners,**

**Bread and Cake Coolers,**

**Dish Drainers, Kitchen**

**Forks, Vegetable Lifters,**

**Vegetable Mashers, Skim-**

**mers, Strainers, Toasters,**

**Potato Fryers, Berry**

**Washers, Culinary Bas-**

**kets)—**

Andrews Wire & Iron Works, Rockford,

Ill.

Cleveland Stamping & Tool Co., Cleve-

land, O.

Kilbourne Mfg. Co., Troy, N. Y.

Landers, Frary & Clark, New Britain, Ct.  
Parker Wire Goods Co., Worcester, Mass.  
Spencer Wire Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.  
**Kitchen Forks, Knives—**  
(See Forks, Knives.)

**Kitchen Saws—**  
(See Saws, Butcher and Kitchen.)

**Kits, Pickle, &c.—**  
American Woodenware Mfg. Co., Toledo, O.

Richmond Cedar Works, Richmond, Va.  
**Kits, Tool, Electric Inspectors'—**

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

**Knees, Bob Iron—**  
S. Cheney & Son, Manlius, N. Y.

**Knees, Sample Case—**  
Eagle Lock Co., Terryville, Ct.

**Knife Sharpeners—**  
(See Sharpeners, Knife.)

**Knives and Forks, Carving—**  
American Cutlery Co., Chicago, Ill.  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Goodell Co., Antrim, N. H.

Landers, Frary & Clark, New Britain, Ct.  
**Knives and Forks, Cooks'—**

Landers, Frary & Clark, New Britain, Ct.  
**Knives, Angle—**

Simonds Mfg. Co., Fitchburg, Mass.

**Knives, Apple, Trimming—**  
Goodell Co., Antrim, N. H.

Landers, Frary & Clark, New Britain, Ct.  
**Knives, Appurages—**

Goodell Co., Antrim, N. H.  
**Knives, Banana—**

Dame, Stoddard & Co., Boston, Mass.  
Goodell Co., Antrim, N. H.

Landers, Frary & Clark, New Britain, Ct.  
**Knives, Beet—**

American Fork & Hoe Co., Cleveland, O.  
E. C. Atkins & Co., Indianapolis, Ind.

Geo. H. Bishop & Co., Cincinnati, O.  
Columbian Cutlery Co., Reading, Pa.

Henry Disston & Sons, Philadelphia, Pa.  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Belt—**  
American Tool & Machine Co., Boston,

**Knives, Bread—**  
North Wayne Tool Co., Hallowell, Me.

**Knives, Broom—**  
Goodell Co., Antrim, N. H.

**Knives, Butcher, Slicing.**  
**Bread, Shoe, &c.—**

American Cutlery Co., Chicago, Ill.  
Hermann Boker & Co., 101 Duane St.,

New York.  
John Chatillon & Sons, 85 Cliff St., N. Y.

Columbian Cutlery Co., Reading, Pa.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.

Dame, Stoddard & Co., Boston, Mass.  
Goodell Co., Antrim, N. H.

Landers, Frary & Clark, New Britain, Ct.  
Supple Hardware Co., Market and 5th

Sts., Philadelphia, Pa.  
Tuck Mfg. Co., Brockton, Mass.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

John Wilson, Sheffield, England.  
(See also Knives, Bread.)

**Knives, Butter—**  
Goodell Co., Antrim, N. H.

Landers, Frary & Clark, New Britain, Ct.

**Knives, Cableman's, Chip-  
ping and Stripping—**  
Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

**Knives, Cake—**  
Goodell Co., Antrim, N. H.  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Cane—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Geo. H. Bishop & Co., Cincinnati, O.  
Henry Disston & Sons, Philadelphia, Pa.  
National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

**Knives, Chamber—**  
L. & I. J. White Co., Buffalo, N. Y.

**Knives, Cheese—**  
Goodell Co., Antrim, N. H.

Landers, Frary & Clark, New Britain, Ct.  
**Knives, Cigar—**

American Cutlery Co., Chicago, Ill.  
Dame, Stoddard & Co., Boston, Mass.

Goodell Co., Antrim, N. H.  
Landers, Frary & Clark, New Britain, Ct.

National Saw Co., Newark, N. J.  
**Knives, Cloth, Skirt and**

**Mattings—**  
W. H. Compton Shear Co., Newark, N. J.

**Knives, Combination, and**  
**Screw Driver—**

Billings & Spencer Co., Hartford, Ct.  
**Knives, Cork, Cloth, Leather-**

**Paper—**  
(See Cutters, Cork, Cloth, Leather,

Paper.)  
**Knives, Corn—**

American Fork & Hoe Co., Cleveland, O.  
E. C. Atkins & Co., Indianapolis, Ind.

Geo. H. Bishop & Co., Cincinnati, O.  
Henry Disston & Sons, Philadelphia, Pa.

Goodell Co., Antrim, N. H.  
John H. Graham & Co., 113 Chambers

St., New York.  
Landers, Frary & Clark, New Britain, Ct.

National Saw Co., Newark, N. J.  
North Wayne Tool Co., Hallowell, Me.

**Knives, Corn and Cuticle—**  
Clausen Shear Co., Fremont, O.

**Knives, Cotton Sampling—**  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Crumb—**  
American Cutlery Co., Chicago, Ill.

**Knives, Drawing—**  
Buck Bros., Millbury, Mass.

Henry Disston & Sons, Philadelphia, Pa.  
C. E. Jennings & Co., 42 Murray St.,

New York.  
Peck, Stow & Wilcox Co., 27 Murray St.,

New York.  
Reliance Edge Tool Co., Youngstown, O.

James Swan Co., Seymour, Ct.  
L. & I. J. White Co., Buffalo, N. Y.

Winsted Edge Tool Works, Winsted, Ct.  
**Knives, Drawing, Adjust-**

**able Handle—**  
Winsted Edge Tool Works, Winsted, Ct.

**Knives, Drawing, Folding**  
**Handle—**

Reliance Edge Tool Co., Youngstown, O.  
**Knives, Farrier—**

Heller Bros. Co., Newark, N. J.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette

St., New York.  
**Knives, Fish—**

Landers, Frary & Clark, New Britain, Ct.

**Knives, Fruit—**  
Columbian Cutlery Co., Reading, Pa.  
Goodell Co., Antrim, N. H.  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Furriers—**  
Dame, Stoddard & Co., Boston, Mass.

**Knives, Glass Handle—**  
Goodell Co., Antrim, N. H.

**Knives, Glaziers—**  
(See Knives, Putty.)

**Knives, Grape Fruit—**  
Goodell Co., Antrim, N. H.

**Knives, Hacking—**  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Hay and Straw—**  
Iwan Bros., South Bend, Ind.

Ney Mfg. Co., Canton, O.  
North Wayne Tool Co., Hallowell, Me.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Knives, Hedge—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Geo. H. Bishop & Co., Cincinnati, O.  
Henry Disston & Sons, Philadelphia, Pa.

**Knives, Hunting—**  
Goodell Co., Antrim, N. H.  
Landers, Frary & Clark, New Britain, Ct.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Knives, Kitchen—**  
American Cutlery Co., Chicago, Ill.  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Claus Shear Co., Fremont, O.  
Columbian Cutlery Co., Reading, Pa.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Dame, Stoddard & Co., Boston, Mass.  
Goodell Co., Antrim, N. H.  
Landers, Frary & Clark, New Britain, Ct.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Knives, Lemon—**  
Dame, Stoddard & Co., Boston, Mass.  
Goodell Co., Antrim, N. H.  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Machine (Planer, Paper Cutting, Leather Splitting, Chair Bottom, Washboard, Stave, Miter, &c.)—**

E. C. Atkins & Co., Indianapolis, Ind.  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Cros Wrench Co., Worcester, Mass.  
Henry Disston & Sons, Philadelphia, Pa.  
Fox Machine Co., Grand Rapids, Mich.  
Heppenstall Forge & Knife Co., Pittsburgh, Pa.

Hobbs Mfg. Co., Worcester, Mass.  
National Saw Co., Newark, N. J.  
Oliver Machinery Co., Grand Rapids, Mich.

Simonds Mfg. Co., Fitchburg, Mass.  
L. & I. J. White Co., Buffalo, N. Y.

**Knives, Manual Training—**  
(See Knives, Sloyd.)

**Knives, Matting—**  
(See Knives, Cloth, Skirt and Matting.)

**Knives, Metal Shear—**  
(See Blades, Metal Shear.)

**Knives, Mincing—**  
Arcade Mfg. Co., Freeport, Ill.

Geo. H. Bishop & Co., Cincinnati, O.  
Claus Shear Co., Fremont, O.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
John H. Graham & Co., 113 Chambers St., New York.

Kilbourne Mfg. Co., Troy, N. Y.  
Landers, Frary & Clark, New Britain, Ct.  
National Saw Co., Newark, N. J.

**Knives, Mixing—**  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Mower and Reaper—**

Whitman & Barnes Mfg. Co., Chicago.

**Knives, One Arm Man's—**  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Orange—**  
Erie Specialty Co., Erie, Pa.

Goodell Co., Antrim, N. H.

**Knives, Oyster and Clam—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

Dame, Stoddard & Co., Boston, Mass.  
Landers, Frary & Clark, New Britain, Ct.

Tuck Mfg. Co., Brockton, Mass.

**Knives, Paper Cutter—**  
E. C. Atkins & Co., Indianapolis, Ind.

Billings & Spencer Co., Hartford, Ct.

**Knives, Paper Hangers—**  
American Cutlery Co., Chicago, Ill.

Dame, Stoddard & Co., Boston, Mass.

Goodell Co., Antrim, N. H.

Landers, Frary & Clark, New Britain, Ct.

Webster & Perks Tool Co., Springfield, O.

**Knives, Paper, Oil Cloth, Rubber, Cork, Leather, Cloth, &c.—**

E. C. Atkins & Co., Indianapolis, Ind.

Billings & Spencer Co., Hartford, Ct.

Dame, Stoddard & Co., Boston, Mass.

Henry Disston & Sons, Philadelphia, Pa.

Landers, Frary & Clark, New Britain, Ct.

Tuck Mfg. Co., Brockton, Mass.

**Knives, Paper Trimming—**  
L. & I. J. White Co., Buffalo, N. Y.

**Knives, Pie—**  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Planer—**  
L. & I. J. White Co., Buffalo, N. Y.

**Knives, Pocket Tool Kit—**  
Adolph Kastor & Bros., 109 Duane St., New York.

**Knives, Press Button—**  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Knives, Pruning—**  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Knives, Putty—**  
American Cutlery Co., Chicago, Ill.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Columbian Cutlery Co., Reading, Pa.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Goodell Co., Antrim, N. H.

Landers, Frary & Clark, New Britain, Ct.

**Knives, Rotary Slitting—**  
E. C. Atkins & Co., Indianapolis, Ind.

Blake & Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Niagara Machine & Tool Works, Buffalo, N. Y.

Simonds Mfg. Co., Fitchburg, Mass.

**Knives, Saw—**  
E. C. Atkins & Co., Indianapolis, Ind.

Geo. H. Bishop & Co., Cincinnati, O.

Henry Disston & Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.

Simonds Mfg. Co., Fitchburg, Mass.

**Knives, Serrated, Kitchen, Carving, &c.—**  
Claus Shear Co., Fremont, O.



**Knives, Shirt Makers'—**  
Dame, Stoddard & Co., Boston, Mass.

**Knives, Silver Plated—**  
Goodell Co., Antrim, N. H.

**Knives, Slicing, Ham and Beef—**  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Slot—**  
(See Knives, Cloth, Skirt and Matting.)

**Knives, Sloyd—**  
Dame, Stoddard & Co., Boston, Mass.

**Knives, Sportsmen's—**  
Billings & Spencer Co., Hartford, Ct.  
Goodell Co., Antrim, N. H.

**Knives, Stave—**  
L. & I. J. White Co., Buffalo, N. Y.

**Knives, Steak, Individual—**  
Goodell Co., Antrim, N. H.

**Knives, Strike Brick—**  
E. C. Atkins & Co., Indianapolis, Ind.

**Knives, Tobacco—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Landers, Frary & Clark, New Britain, Ct.

**Knives, Tomatoes—**  
Tuck Mfg. Co., Brockton, Mass.

**Knives, Tomato—**  
Goodell Co., Antrim, N. H.

**Knives, Veneer—**  
L. & I. J. White Co., Buffalo, N. Y.

**Knives, Wood Pulp—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Simonds Mfg. Co., Fitchburg, Mass.

**Knobs, Base and Floor—**  
Jos. Bardsley, 147-151 Baxter St., N. Y.

**Knobs, Base and Floor—**  
W. R. Hargan, Collinsville, Ct.

**Knobs, Base and Floor—**  
H. A. Stiles & Co., Boston, Mass.  
Union Hardware Co., Torrington, Ct.

**Knobs, Carriage—**  
Walter W. Woodruff & Sons Co., Mt. Carmel, Ct.

**Knobs, Door—**  
Jos. Bardsley, 147-151 Baxter St., N. Y.

**Knobs, Door—**  
Otto Konigsow Mfg. Co., Cleveland, O.

**Knobs, Door—**  
Piqua Handle & Mfg. Co., Piqua, O.

**Knobs, Door—**  
Reading Hardware Co., Reading, Pa.

**Knobs, Door—**  
Russell & Erwin Mfg. Co., 43-47 Chambers St., New York.

**Knobs, Drawer and Shutter—**  
Taylor & Boggis Foundry Co., Cleveland, O.

**Knobs, Drawer and Shutter—**  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Knobs, Enameled—**  
Jos. Bardsley, 147-151 Baxter St., N. Y.

**Knobs, Enameled—**  
H. B. Ives & Co., New Haven, Ct.

**Knobs, Enameled—**  
H. A. Matthews Mfg. Co., Seymour, Ct.

**Knobs, Enameled—**  
Reading Hardware Co., Reading, Pa.

**Knobs, Enameled—**  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Knobs, Enameled—**  
Taylor & Boggis Foundry Co., Cleveland, O.

**Knobs, Enameled—**  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Knobs, Enameled—**  
Baker, McMillen Co., Akron, O.

**Knobs, Enameled—**  
H. A. Stiles & Co., Boston, Mass.

**Knobs, Enameled—**  
Turner & Stanton Co., Norwich, Ct.

**Knobs, Enameled—**  
Baker, McMillen Co., Akron, O.

**Knobs, Enameled—**  
Turner & Stanton Co., Norwich, Ct.

**Knobs, Enameled—**  
H. A. Stiles & Co., Boston, Mass.

**Knobs, Enameled—**  
Knobs, Tea and Coffee Pot Repair—

Lasher Mfg. Co., Davenport, Ia.

**Knockers, Door—**  
Reading Hardware Co., Reading, Pa.

**Knockers, Door—**  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Knockers, Door—**  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Knuckles, Steel—**  
American Steel Foundries, 42 Broadway, New York.

**Knurling Tools—**  
(See Tools, Knurling.)

**Knurls and Knurled Nuts—**  
(See Nuts, Knurled.)

**Knurls, Wrench—**  
Hartford Machine Screw Co., Hartford, Ct.

**Labeling Machines, Bottle—**  
Chas. E. Leffler & Co., Brooklyn, N. Y.

**Labels, Brass—**  
George M. Ness, Jr., 61 Fulton St., N. Y.

**Labels, Brass—**  
Schwerdtle Stamp Co., Bridgeport, Ct.

**Labels, Gas Meter—**  
American Railway Supply Co., 24 Park Place, New York.

**Laboratory Outfits—**  
Eimer & Amend, 205 Third Ave., N. Y.

**Lacing, Leather, Rawhide, Steel—**  
Lunkenheimer Co., Cincinnati, O.

**Lacing, Leather, Rawhide, Steel—**  
(See Belt Lacing; also Hooks and Fasteners, Belt.)

**Lacquers—**  
Hanson & Van Winkle Co., Newark, N. J.

**Ladders, Rolling Store—**  
Zucker & Levett & Loeb Co., 526-530 West 25th St., New York.

**Ladder Extensions, Masons—**  
Jas. L. Taylor Mfg. Co., Bloomfield, N. J.

**Ladders, Painters' and Paper Hangers—**  
R. W. Whitehurst Co., Norfolk, Va.

**Ladders, Rolling Store—**  
Bicycle Step Ladder Co., 65 Randolph St., Chicago, Ill.

**Ladders, Rolling Store—**  
Lane Bros. Co., Poughkeepsie, N. Y.

**Ladders, Rolling Store—**  
McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.

**Ladders, Rolling Store—**  
S. B. Martin, Dalton, O.

**Ladders, Rolling Store—**  
Milbradt Mfg. Co., St. Louis, Mo.

**Ladders, Rolling Store—**  
F. E. Myers & Bro., Ashland, O.

**Ladders, Rolling Store—**  
Richards Mfg. Co., Aurora, Ill.

**Ladders, Rolling Store—**  
J. D. Warren Mfg. Co., Chicago, Ill.

**Ladders, Sectional, Extension and Single—**  
Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

**Ladders, Steel—**  
F. E. Myers & Bro., Ashland, O.

**Ladders, Steel Folding—**  
American File Sharpener Co., 236 Broadway, New York.

**Ladders, Step—**  
H. B. Fuller, St. Paul, Minn.

**Ladders, Step—**  
Milbradt Mfg. Co., St. Louis, Mo.

**Ladders, Step—**  
New Britain Machine Co., New Britain, Ct.

**Ladders, Step—**  
R. W. Whitehurst Co., Norfolk, Va.

**Ladle Stoppers—**  
(See Stoppers, Ladle.)

**Ladles, Babbitt—**  
Byram & Co., Inc., Detroit, Mich.

**Ladles, Babbitt—**  
S. Obermayer Co., Cincinnati, O.

**Ladles, Bottom Tap—**  
Northern Engineering Works, Detroit, Mich.

Whiting Foundry Equipment Co., Harvey, Ill.

**Ladles, Buggy or Truck—**  
Mesta Machine Co., Pittsburgh, Pa.  
Northern Engineering Works, Detroit, Mich.

Pacific Iron Works, Bridgeport, Ct.  
Whiting Foundry Equipment Co., Harvey, Ill.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Ladies, Foundry—**  
Kram & Co., Inc., Detroit, Mich.

W. J. Clark Co., Salem, O.  
Arthur Koppel Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Meehan Boiler & Construction Co., Lowellville, O.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

Northern Engineering Works, Detroit, S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., Philadelphia, Pa.  
Petroleum Iron Works Co., Sharon, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.  
Western Foundry Supply Co., 50 Church St., New York.

Whiting Foundry Equipment Co., Harvey, Ill.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Ladles, Melting—**  
W. J. Clark Co., Salem, O.

Lalanc & Grossman Mfg. Co., 299 Broadway, New York.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Meehan Boiler & Construction Co., Lowellville, O.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

S. Obermayer Co., Cincinnati, O.  
J. W. Paxson Co., Philadelphia, Pa.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Pennsylvania Engineering Works, New Castle, Pa.

Petroleum Iron Works Co., Sharon, Pa.  
Reading Hardware Co., Reading, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.  
Whiting Foundry Equipment Co., Harvey, Ill.

Wrightsville Hardware Co., Wrightsville, Pa.

**Lag and Coach Screws—**  
(See Screws, Coach and Lag.)

**Lamp Attachments, Electric, for Gas Fixtures—**  
(See Electric Light Fittings.)

**Lamp Brackets, Chimney Heaters, &c.—**  
(See Brackets, Heaters, &c.)

**Lamp Chimney Cleaners—**  
(See Cleaners, Bottle and Lamp Chimney.)

**Lamp Cord—**  
(See Wires, Electrical.)

**Lamp Hooks—**  
(See Hooks, Chandelier or Lamp.)

**Lamp Parts—**  
(See Automobile Parts.)

**Lamp Trimmings—**  
(See Trimmings, Lamp.)

**Lampblack—**  
Samuel Cabot, Inc., Boston, Mass.

**Lamps, Acetylene, Carriage and Automobile—**

Bridgeport Brass Co., 253 Broadway, N. Y.  
R. E. Dietz Co., 60 Lighthouse St., N. Y.

Rollman Mfg. Co., Mount Joy, Pa.

**Lamps, Arc—**  
American Arc Lamp Co., Kalamazoo, Mich.

Crocker-Wheeler Co., Ampere, N. J.  
Fort Wayne Electric Works, Fort Wayne, Ind.

General Electric Co., Schenectady, N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Lamps, Automobile, Oil—**  
John H. Graham & Co., 113 Chambers St., New York.

**Lamps, Bicycle—**  
Bridgeport Brass Co., 253 B'way, N. Y.

R. E. Dietz Co., 60 Lighthouse St., N. Y.  
Scovill Mfg. Co., Waterbury, Ct.

**Lamps, Dash—**  
R. E. Dietz Co., 60 Lighthouse St., N. Y.

**Lamps, Electric, Automobile—**  
R. E. Dietz Co., 60 Lighthouse St., N. Y.

**Lamps, Electrical, Ornamental—**  
A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.

**Lamps, Enclosed Arc—**  
General Electric Co., Schenectady, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Lamps, Five O'Clock Tea—**  
New York Stamping Co., Brooklyn, N. Y.

**Lamps, Gas Cluster—**  
Turner Brass Works, Sycamore, Ill.

**Lamps, Gasoline Gas—**  
American Gas Machine Co., Albert Lea, Minn.

Schneider & Trenkamp Co., Div. American Stove Co., Cleveland, O.

Turner Brass Works, Sycamore, Ill.

**Lamps, Hand—**  
Bridgeport Brass Co., 253 B'way, N. Y.

Gem Mfg. Co., Pittsburgh, Pa.

**Lamps, Hunting, Hanging, &c.—**  
R. E. Dietz Co., 60 Lighthouse St., N. Y.

**Lamps, Incandescent—**  
General Electric Co., Schenectady, N. Y.

W. R. Ostrander & Co., 22 Day St., N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Lamps, Iron, Malleable—**  
Hammer & Co., Branford, Ct.

**Lamps, Metallic Frame—**  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Lamps, Miners—**  
American Tube & Stamping Co., Bridgeport, Ct.

Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

Maple City Mfg. Co., Monmouth, Ill.

**Lamps, Motor, Kerosene—**  
R. E. Dietz Co., 60 Lighthouse St., N. Y.

**Lamps, Ornamental Electric—**  
Stewart Iron Works Co., Inc., Cincinnati, O.

W. S. Tyler Co., Cleveland, O.

**Lamps, Shoemakers' Kit—**  
Louis Sacks, Newark, N. J.

- Lamps, Shop and Foundry—**  
Forest City Foundry & Mfg. Co., Cleveland, O.  
S. Obermayer Co., Cincinnati, O.  
Osborn Mfg. Co., Cleveland, O.  
J. W. Paxson Co., Philadelphia, Pa.  
Schneider & Trenkamp Co., Div. American Stove Co., Cleveland, O.  
Taylor & Boggis Foundry Co., Cleveland.
- Lamps, Street, Gasoline—**  
Turner Brass Works, Sycamore, Ill.
- Lamps, Street, Yard, Mill, &c.—**  
American Gas Machine Co., Albert Lea, Minn.  
American Tube & Stamping Co., Bridgeport, Ct.  
R. E. Dietz Co., 60 Laight St., N. Y.  
Schneider & Trenkamp Co., Div. American Stove Co., Cleveland, O.
- Lamps, Table, Banquet, Hanging, Piano, &c.—**  
Bridgeport Brass Co., 233 B'way, N. Y.  
Charles Parker Co., Meriden, Ct.  
Plume & Atwood Mfg. Co., Waterbury, Ct.  
Scovill Mfg. Co., Waterbury, Ct.
- Lanterns, Candle—**  
Arcade Mfg. Co., Freeport, Ill.
- Lanterns, Fire Department—**  
R. E. Dietz Co., 60 Laight St., N. Y.
- Lanterns, Kerosene, &c.—**  
Bridgeport Brass Co., 233 B'way, N. Y.  
Delphos Mfg. Co., Delphos, O.  
R. E. Dietz Co., 60 Laight St., N. Y.
- Lanterns, Mill—**  
R. E. Dietz Co., 60 Laight St., N. Y.
- Lanterns, Railroad and Conductors—**  
R. E. Dietz Co., 60 Laight St., N. Y.
- Lanterns, Tubular—**  
(See Lanterns, Kerosene, &c.)
- Lap Lasts—**  
(See Lasts, Lap.)
- Lapping Machines—**  
Blake & Johnson Co., Waterbury, Ct.  
Builders' Iron Foundry, Providence, R. I.  
Niles-Bement-Pond Co., 111 Broadway, New York.
- Lard Presses—**  
(See Presses, Lard.)
- Lariat and Picket Pins—**  
Covert Mfg. Co., Troy, N. Y.  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Lariats—**  
Broderick & Bascom Rope Co., St. Louis.  
A. Leschen & Sons Rope Co., St. Louis.  
Plymouth Cordage Co., North Plymouth, Mass.  
Samson Cordage Works, Boston, Mass.  
Silver Lake Co., Boston, Mass.
- Larries, Scale—**  
Wellman-Seaver-Morgan Co., Cleveland, O.
- Last Turning Machinery—**  
(See Lathes, Last.)
- Lasts and Stands, Shoe—**  
Arcade Mfg. Co., Freeport, Ill.  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.
- Heath Foundry & Mfg. Co., Plymouth, O.  
Louis Sacks, Newark, N. J.  
Wrightsville Hardware Co., Wrightsville, Pa.  
(See also Cobblers' Outfits.)
- Lasts, Lap—**  
Heath Foundry & Mfg. Co., Plymouth, O.  
Louis Sacks, Newark, N. J.
- Latches and Locks, Door, Barn Door—**  
(See Locks and Latches.)
- Latches, Automatic, Fire Engine House Door—**  
Chicago Spring Butt Co., Chicago, Ill.
- Latches, Door—**  
(See Locks, Latches, &c.)
- Latches, Elevator Door—**  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.
- Latches, Gate—**  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Susquehanna Castings Co., Wrightsville, Pa.
- Latches, Locks, &c.—**  
(See Locks, Latches, &c.)
- Latches, Night—**  
Eagle Lock Co., Terryville, Ct.  
Miller Lock Co., Philadelphia, Pa.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.
- Latches, Refrigerator—**  
Reading Hardware Co., Reading, Pa.
- Latches, Screen Door—**  
Andrews Wire & Iron Works, Rockford, Ill.
- Latches, Thumb—**  
Columbia Grey Iron Co., Columbia, Pa.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Lawrence Bros., Sterling, Ill.  
Ney Mfg. Co., Canton, O.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.
- Latching Hardware Co., Reading, Pa.**  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.
- Latches, Water Closet—**  
Stanley Works, New Britain, Ct.  
Bommer Bros., Brooklyn, N. Y.  
H. B. Ives Co., New Haven, Ct.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.
- Lath, Corrugated, Expanded Metal—**  
Yale & Towne Mfg. Co., 9 Murray St., New York.  
Buffalo Wire Works Co., Buffalo, N. Y.  
General Fireproofing Co., Youngstown, O.  
Michigan Wire Cloth Co., Detroit, Mich.  
Youngstown Iron & Steel Roofing Co., Youngstown, O.
- Lath Machines, Sheet Metal—**  
F. W. Bliss Co., Brooklyn, N. Y.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
George A. Ohl & Co., Newark, N. J.

**Lath Machines, Wood—**

Lane Mfg. Co., Montpelier, Vt.

**Lath, Sheet Metal—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

General Fireproofing Co., Youngstown, O.  
New Jersey Wire Cloth Co., Trenton, N. J.

Youngstown Iron & Steel Roofing Co., Youngstown, O.

**Lath, Wire—**

Buffalo Wire Works Co., Inc., Buffalo, N. Y.

Clinton Wire Cloth Co., Clinton, Mass.

Dufur & Co., Baltimore, Md.  
Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Michigan Wire Cloth Co., Detroit, Mich.  
New Jersey Wire Cloth Co., Trenton, N. J.

W. S. Tyler Co., Cleveland, O.  
Wright Wire Co., Worcester, Mass.

**Lath, Yarn—**

Broderick & Bascom Rope Co., St. Louis, A. Leschen & Sons Rope Co., St. Louis.

**Lath Attachments, Bench—**

Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

O. K. Tool Holder Co., Shelton, Ct.

**Lathes, Chucks, Dogs, &c.—**

(See Chucks, Dogs, &c.)

**Lathes—**

American Tool Works Co., Cincinnati, O.  
Automatic Machine Co., Bridgeport, Ct.

W. F. & J. Barnes Co., Rockford, Ill.

Blake & Johnson Co., Waterbury, Ct.

Bradford Machine Tool Co., Cincinnati, O.

Champion Tool Works Co., Cincinnati, O.

W. P. Davis Machine Co., Rochester, N. Y.

Dress Machine Tool Co., Cincinnati, O.

Garvin Machine Co., Spring and Varick Sts., New York.

Greaves, Klusman & Co., Cincinnati, O.

E. Harrington, Con & Co., Inc., Philadelphia, Pa.

I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.

Jones & Lamson Machine Co., Springfield, Vt.

R. K. Le Blond Machine Tool Co., Cincinnati, O.

Lodge & Shipley Machine Tool Co., Cincinnati, O.

J. J. McCabe, 14 Day St., New York.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

E. J. Manville Machine Co., Waterbury, Ct.

Millers Falls Co., 28 Warren St., N. Y.

New Haven Mfg. Co., New Haven, Ct.

Niles-Bement-Pond Co., 111 Broadway, New York.

Oliver Machinery Co., Grand Rapids, Mich.

Potter & Johnston Machine Co., Pawtucket, R. I.

Pratt & Whitney Co., Hartford, Ct.

F. E. Reed Co., Worcester, Mass.

Rockford Drilling Machine Co., Rockford, Ill.

Schuchardt & Schutte, 90 West St., N. Y.

Schumacher & Boye, Cincinnati, O.

Seneca Falls Mfg. Co., Seneca Falls, N. Y.

Taylor Machinery Co., Boston, Mass.

Waltham Machine Works, Waltham, Mass.

Warner & Swasey Co., Cleveland, O.

Whitcomb-Elaisdell Machine Tool Co., Worcester, Mass.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.

W. B. Beatty Machinery & Equipment Co., Pittsburgh, Pa.

Brown & Zortman Machinery Co., Pittsburgh, Pa.

Hannon-Finton Co., Springfield, Mass.

Hill, Clarke & Co., Boston, Mass.

W. C. Johnson & Sons Machinery Co., St. Louis, Mo.

Marshall & Huschart Machinery Co., 62 64 S. Canal St., Chicago, Ill.

Edgar M. Moore & Co., Pittsburgh, Pa.

McDowell, Stocker & Co., 59 S. Canal St., Chicago, Ill.

Motch & Merryweather Machinery Co., Cleveland, O.

Perkins & Frecker, 136 Liberty St., N. Y.

Prentiss Tool & Supply Co., 115 Liberty St., New York.

F. P. Schielein Machinery Co., Pittsburgh, Pa.

Scully Steel & Iron Co., 69 No. Halsted St., Chicago, Ill.

L. I. Seyfert's Sons, Inc., 437-441 N. 3d St., Philadelphia, Pa.

H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.

Frank Toomey, 127-131 N. 3d St., Philadelphia, Pa.

Jacob Ullman, Buffalo, N. Y.

Vandick, Churchill Co., 8 Day St., N. Y.

A. O. Walworth & Co., 143-147 Clinton St., Chicago, Ill.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

**Lathes, All Geared Head—**

American Tool Works Co., Cincinnati, O.

**Lathes, Armature Banding—**

Greaves, Klusman & Co., Cincinnati, O.

**Lathes, Automatic Chuck**

**Turret—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Petter & Johnston Machine Co., Pawtucket, R. I.

Pratt & Whitney Co., Hartford, Ct.

**Lathes, Automatic Screw**

**Threading—**

Automatic Machine Co., Bridgeport, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Pratt & Whitney Co., Hartford, Ct.

**Lathes, Axle—**

I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.

Lodge & Shipley Machine Tool Co., Cincinnati, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

Pacific Iron Works, Bridgeport, Ct.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.

Brown & Zortman Machinery Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

- Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
 Motch & Merryweather Machinery Co., Cleveland, O.  
 A. D. White Machinery Co., 27-31 S. Jefferson St., Chicago, Ill.  
 Wickes Bros., Saginaw, Mich.  
 C. C. Wormer Machinery Co., Detroit, Mich.
- Lathes, Bench—**  
 Garvin Machine Co., Spring & Varick Sts., New York.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Hardinge Bros., 1036 Lincoln Ave., Chicago, Ill.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Pratt & Whitney Co., Hartford, Ct.  
 F. E. Reed Co., Worcester, Mass.  
 Rockford Drilling Machine Co., Rockford, Ill.  
 Seneca Falls Mfg. Co., Seneca Falls, N. Y.  
 Taylor & Fenn Co., Hartford, Ct.  
 Waltham Machine Works, Waltham, Mass.  
 F. E. Wells & Sons Co., Greenfield, Mass.
- Lathes, Brass—**  
 American Tool & Machine Co., Boston.  
 Dreses Machine Tool Co., Cincinnati, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Pacific Iron Works, Bridgeport, Ct.  
 Warner & Swasey Co., Cleveland, O.  
 Wood Turret Machine Co., Brazil, Ind.
- MERCHANTS.**  
 Hill, Clarke & Co., Boston, Mass.  
 Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
 Motch & Merryweather Machinery Co., Cleveland, O.  
 A. D. White Machinery Co., 27-31 S. Jefferson St., Chicago, Ill.  
 C. C. Wormer Machinery Co., Detroit, Mich.
- Lathes, Buffing and Polishing—**  
 (See Buffing and Polishing Machines.)
- Lathes, Car Wheel—**  
 J. J. McCabe, 14 Dey St., New York.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.
- Lathes, Chucking—**  
 American Tool Works Co., Cincinnati, O.  
 Bradford Machine Tool Co., Cincinnati.  
 Champion Tool Works Co., Cincinnati, O.  
 Dreses Machine Tool Co., Cincinnati, O.  
 Garvin Machine Co., Spring & Varick Sts., New York.  
 Greaves, Klusman & Co., Cincinnati, O.  
 I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
 Jones & Lamson Machine Co., Springfield, Vt.  
 R. K. Le Blond Machine Tool Co., Cincinnati, O.  
 Lodge & Shipley Machine Tool Co., Cincinnati, O.  
 New Haven Mfg. Co., New Haven, Ct.
- Niles-Bement-Pond Co., 111 Broadway, New York.  
 Potter & Johnston Machine Co., Pawtucket, R. I.  
 F. E. Reed Co., Worcester, Mass.  
 Schumacher & Boye, Cincinnati, O.  
 Warner & Swasey Co., Cleveland, O.  
 F. E. Wells & Sons Co., Greenfield, Mass.
- MERCHANTS.**  
 Baird Machinery Co., Pittsburgh, Pa.  
 Hill, Clarke & Co., Boston, Mass.  
 Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
 Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
 Motch & Merryweather Machinery Co., Cleveland, O.  
 Perkins & Frecker, 136 Liberty St., N. Y.  
 Vandyck, Churchill Co., 8 Dey St., New York.  
 A. D. White Machinery Co., 27-31 S. Jefferson St., Chicago, Ill.  
 C. C. Wormer Machinery Co., Detroit, Mich.
- Lathes, Chucking Turret—**  
 American Tool Works Co., Cincinnati, O.  
 Bradford Machine Tool Co., Cincinnati.  
 Champion Tool Works Co., Cincinnati, O.  
 Greaves, Klusman & Co., Cincinnati, O.  
 I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
 Jones & Lamson Machine Co., Springfield, Vt.  
 Lodge & Shipley Machine Tool Co., Cincinnati, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Potter & Johnston Machine Co., Pawtucket, R. I.  
 F. E. Reed Co., Worcester, Mass.  
 Schumacher & Boye, Cincinnati, O.
- Lathes, Crank Shaft—**  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Schumacher & Boye, Cincinnati, O.  
 Tindel-Morris Co., Eddystone, Pa.
- Lathes, Double Spindle—**  
 J. J. McCabe, 14 Dey St., New York.
- Lathes, Duplex Drill—**  
 Garvin Machine Co., Spring & Varick Sts., New York.
- Lathes, Edging—**  
 Blake & Johnson Co., Waterbury, Ct.  
 Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.
- Lathes, Electric, Dental and Jewelers'—**  
 (See Lathes, Electrically Driven.)
- Lathes, Electrically Driven—**  
 American Tool Works Co., Cincinnati, O.  
 Holtzer-Cabot Electric Co., Boston, Mass.  
 Lodge & Shipley Machine Tool Co., Cincinnati, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Lathes, Engine—**  
 American Tool Works Co., Cincinnati, O.  
 Automatic Machine Co., Bridgeport, Ct.  
 W. F. & John Barnes Co., Rockford, Ill.  
 Bradford Machine Tool Co., Cincinnati.

Champion Tool Works Co., Cincinnati, O.  
W. P. Davis Machine Co., Rochester, N. Y.  
Flather & Co., Inc., Nashua, N. H.  
Garvin Machine Co., Spring & Varick Sts., New York.  
Greaves, Klusman & Co., Cincinnati, O.  
E. Harrington, Son & Co., Inc., Philadelphia, Pa.  
Hendey Machine Co., Torrington, Ct.  
I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
R. K. Le Blond Machine Tool Co., Cincinnati, O.  
Lodge & Shipley Machine Tool Co., Cincinnati, O.  
J. J. McCabe, 14 Dey St., New York.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
New Haven Mfg. Co., New Haven, Ct.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Pratt & Whitney Co., Hartford, Ct.  
F. E. Reed Co., Worcester, Mass.  
Rockford Drilling Machine Co., Rockford, Ill.  
Schumacher & Boye, Cincinnati, O.  
Seneca Falls Mfg. Co., Seneca Falls, N. Y.  
Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.  
Brown & Zortman Machinery Co., Pittsburgh, Pa.  
Hannan-Finton Co., Springfield, Mass.  
Hill, Clarke & Co., Boston, Mass.  
McDowell & Co., Allegheny, Pa.  
McDowell, Stocker & Co., 59 S. Canal St., Chicago, Ill.  
Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Edgar M. Moore & Co., Pittsburgh, Pa.  
Metch & Merryweather Machinery Co., Cleveland, O.  
Perkins & Frecker, 136 Liberty St., N. Y.  
Frentiss Tool & Supply Co., 115 Liberty St., New York.  
L. F. Seyfert's Sons, Inc., 437-441 N. 3d St., Philadelphia, Pa.  
H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.  
Jacob Utman, Buffalo, N. Y.  
Vandyck, Churchill Co., 8 Dey St., N. Y.  
A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
Wickes Bros., Saginaw, Mich.  
C. C. Wormer Machinery Co., Detroit, Mich.

**Lathes, Field Coil Wind-  
ing—**

Greaves, Klusman & Co., Cincinnati, O.  
**Lathes, Foot—**  
W. F. & John Barnes Co., Rockford, Ill.  
Champion Tool Works Co., Cincinnati, O.  
W. P. Davis Machine Co., Rochester, N. Y.  
Garvin Machine Co., Spring & Varick Sts., New York.  
Millers Falls Co., 28 Warren St., N. Y.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
F. E. Reed Co., Worcester, Mass.  
Seneca Falls Mfg. Co., Seneca Falls, N. Y.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.

Hill, Clarke & Co., Boston, Mass.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
L. F. Seyfert's Sons, Inc., 437-441 N. 3d St., Philadelphia, Pa.  
A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
C. C. Wormer Machinery Co., Detroit, Mich.

**Lathes, Forming—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
F. E. Reed Co., Worcester, Mass.  
Warner & Swasey Co., Cleveland, O.

**Lathes, Gap—**

E. Harrington, Son & Co., Inc., Philadelphia, Pa.  
I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Oliver Machinery Co., Grand Rapids, Mich.

**Lathes, Gap, Extension—  
(See Lathes, Gap.)**

**Lathes, Golf Head Form-  
ing—**

Kimball Bros. & Sprague, Brockton, Mass.  
**Lathes, Grinding Attach-  
ments for—**

Diamond Machine Co., Providence, R. I.  
**Lathes, Gun Barrel Turning  
and Boring—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
F. E. Reed Co., Worcester, Mass.

**Lathes, Gun Turning and  
Boring—**

I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Lathes, Hand—**

Chicago Machine Tool Co., Chicago, Ill.  
I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Seneca Falls Mfg. Co., Seneca Falls, N. Y.

**Lathes, Hand, Universal—**

Brown & Sharpe Mfg. Co., Providence, R. I.  
Hayden & Derby Mfg. Co., 85-89 Liberty St., New York.

**Lathes, Ingot—**

I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Lathes, Lat—**

Kimball Bros. & Sprague, Brockton, Mass.  
**Lathes, Locomotive Driving  
Wheel—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Lathes, Manual Training—**

J. C. Blount Co., Everett, Mass.  
 Champion Tool Works Co., Cincinnati, O.  
 Greaves, Klusman & Co., Cincinnati, O.  
 Oliver Machinery Co., Grand Rapids, Mich.

F. E. Reed Co., Worcester, Mass.  
 Seneca Falls Mfg. Co., Seneca Falls, N. Y.

F. E. Wells & Sons Co., Greenfield, Mass.

**Lathes, Metal Spinning—**

(See Lathes, Spinning.)

**Lathes, Pit—**

Wickes Bros., Saginaw, Mich.

**Lathes, Precision—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Pratt & Whitney Co., Hartford, Ct.

Seneca Falls Mfg. Co., Seneca Falls, N. Y.

Waltham Machine Works, Waltham, Mass.

**Lathes, Projectile Boring and Turning—**

American Tool Works Co., Cincinnati, O.  
 Bradford Machine Tool Co., Cincinnati, O.

I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Schumacher & Boye, Cincinnati, O.

**Lathes, Pulley Turning—**

American Tool Works Co., Cincinnati, O.  
 Lodge & Shipley Machine Tool Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

New Haven Mfg. Co., New Haven, Ct.

Niles-Bement-Pond Co., 111 Broadway, New York.

Schumacher & Boye, Cincinnati, O.

Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**Lathes, Quick Change Gear—**

American Tool Works Co., Cincinnati, O.  
 Champion Tool Works Co., Cincinnati, O.

Flather & Co., Inc., Nashua, N. H.

Greaves, Klusman & Co., Cincinnati, O.

Hendey Machine Co., Torrington, Ct.

Lodge & Shipley Machine Tool Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Pratt & Whitney Co., Hartford, Ct.

F. E. Reed Co., Worcester, Mass.

Schumacher & Boye, Cincinnati, O.

Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**Lathes, Rapid Reduction—**

American Tool Works Co., Cincinnati, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

F. E. Reed Co., Worcester, Mass.

Schumacher & Boye, Cincinnati, O.

**Lathes, Relieving Attachment—**

Hendey Machine Co., Torrington, Ct.

**Lathes, Roll—**

American Tool Works Co., Cincinnati, O.

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

A. Garrison Foundry Co., Pittsburgh, Pa.

Hyde Park Foundry & Machine Co., Hyde Park, Pa.

I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.

Lewis Foundry & Machine Co., Groveton, Pa.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester, Mass.

Niles-Bement-Pond Co., 111 Broadway, New York.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

**MERCHANTS.**

Manning, Maxwell & Moore, Inc., 85-83 Liberty St., New York.

F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit, Mich.

**Lathes, Roll Engraving—**  
 Gould & Eberhardt, Newark, N. J.

**Lathes, Roll Polishing—**  
 Gould & Eberhardt, Newark, N. J.

**Lathes, Roll Turning—**  
 American Tool Works Co., Cincinnati, O.

**Lathes, Screw Cutting, Foot—**  
 Champion Tool Works Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

F. E. Reed Co., Worcester, Mass.

Seneca Falls Mfg. Co., Seneca Falls, N. Y.

**Lathes, Shaft Turning—**  
 American Tool Works Co., Cincinnati, O.

Bradford Machine Tool Co., Cincinnati, O.

Greaves, Klusman & Co., Cincinnati, O.

E. Harrington, Son & Co., Inc., Philadelphia, Pa.

I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.

Lodge & Shipley Machine Tool Co., Cincinnati, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

F. E. Reed Co., Worcester, Mass.

Schumacher & Boye, Cincinnati, O.

Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**MERCHANTS.**

Hill, Clarke & Co., Boston, Mass.

Manning, Maxwell & Moore, Inc., 85-83 Liberty St., New York.

O. C. Wormer Machinery Co., Detroit, Mich.

**Lathes, Single Pulley Drive, Gear Head—**  
 Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**Lathes, Speed—**  
 J. C. Blount, Everett, Mass.

Chicago Machine Tool Co., Chicago, Ill.

Diamond Machine Co., Providence, R. I.

Dresses Machine Tool Co., Cincinnati, O.

Fox Machine Co., Grand Rapids, Mich.

Garvin Machine Co., Spring & Varick Sts., New York.

Grant Mfg. & Machine Co., Bridgeport, Ct.  
Greaves, Klusman & Co., Cincinnati, O.  
I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
Olver Machinery Co., Grand Rapids, Mich.  
F. E. Reed Co., Worcester, Mass.  
Seneca Falls Mfg. Co., Seneca Falls, N. Y.  
Washburn Shops, Worcester, Mass.  
F. E. Wells & Sons Co., Greenfield, Mass.  
Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.  
Hill, Clarke & Co., Boston, Mass.  
McDowell & Co., Allegheny, Pa.  
McDowell, Stocker & Co., 59 S. Canal St., Chicago, Ill.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co., Cleveland, O.  
Perkins & Frecker, 136 Liberty St., N. Y.  
Vanduyck, Churchill Co., 8 Dey St., N. Y.  
A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
Wickes Bros., Saginaw, Mich.  
C. C. Wormer Machinery Co., Detroit, Mich.

**Lathes, Spindle Boring—**

American Tool Works Co., Cincinnati, O.  
I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
Schumacher & Boye, Cincinnati, O.

**Lathes, Spinning—**

Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Diamond Machine Co., Providence, R. I.  
Ferracute Machine Co., Bridgeton, N. J.  
Greaves, Klusman & Co., Cincinnati, O.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
E. J. Manville Mach. Co., Waterbury, Ct.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**Lathes, Strapping—**

Springfield Mfg. Co., Bridgeport, Ct.

**Lathes, Stud and Bolt—**

Champion Tool Works Co., Cincinnati, O.  
F. E. Reed Co., Worcester, Mass.

**Lathes, Tool Room—**

American Tool Works Co., Cincinnati, O.  
Bradford Machine Tool Co., Cincinnati, O.  
Champion Tool Works Co., Cincinnati, O.  
Flather & Co., Inc., Nashua, N. H.  
Greaves, Klusman & Co., Cincinnati, O.  
Hendey Machine Co., Torrington, Ct.  
Lodge & Shipley Machine Tool Co., Cincinnati, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.  
Pratt & Whitney Co., Hartford, Ct.  
F. E. Reed Co., Worcester, Mass.  
Rockford Drilling Machine Co., Rockford, Ill.  
Schumacher & Boye, Cincinnati, O.  
Seneca Falls Mfg. Co., Seneca Falls, N. Y.  
Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**Lathes, Turret—**

American Tool Works Co., Cincinnati, O.  
J. C. Blount Co., Everett, Mass.  
Bradford Machine Tool Co., Cincinnati, O.  
Bullard Mach. Tool Co., Bridgeport, Ct.  
Champion Tool Works Co., Cincinnati, O.  
W. F. Davis Machine Co., Rochester, N. Y.

Drees Machine Tool Co., Cincinnati, O.  
Flather & Co., Inc., Nashua, N. H.  
Garvin Machine Co., Spring & Varick Sts., New York.  
Greaves, Klusman & Co., Cincinnati, O.  
I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
Jones & Lamson Machine Co., Springfield Vt.

R. K. Le Blond Machine Tool Co., Cincinnati, O.  
Lodge & Shipley Machine Tool Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

New Haven Mfg. Co., New Haven, Ct.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Potter & Johnston Machine Co., Pawtucket, R. I.

Pratt & Whitney Co., Hartford, Ct.  
F. E. Reed Co., Worcester, Mass.  
Schumacher & Boye, Cincinnati, O.  
Warner & Swasey Co., Cleveland, O.  
Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

Wood Turret Machine Co., Brazil, Ind.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.  
Hill, Clarke & Co., Boston, Mass.  
Marshall & Huschart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co., Cleveland, O.  
Perkins & Frecker, 136 Liberty St., N. Y.  
Prentiss Tool & Supply Co., 115 Liberty St., New York.  
Frank Toomey, 127-131 N. 3d St., Philadelphia, Pa.

Vanduyck, Churchill Co., 8 Dey St., N. Y.  
A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
Wickes Bros., Saginaw, Mich.

**Lathes, Turret on Carriage—**

American Tool Works Co., Cincinnati, O.  
Bradford Machine Tool Co., Cincinnati, O.  
Bullard Machine Tool Co., Bridgeport, Ct.  
Champion Tool Works Co., Cincinnati, O.  
Flather & Co., Inc., Nashua, N. H.  
Greaves, Klusman & Co., Cincinnati, O.  
Hendey Machine Co., Torrington, Ct.  
I. H. Johnson, Jr., Co., Inc., 337 N. 15th St., Philadelphia, Pa.  
Lodge & Shipley Machine Tool Co., Cincinnati, O.



Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

F. E. Reed Co., Worcester, Mass.  
Schumacher & Boye, Cincinnati, O.  
Warner & Swasey Co., Cleveland, O.  
F. E. Wells & Sons Co., Greenfield, Mass.

Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**Lathes, Vertical Turret—**  
Bullard Machine Tool Co., Bridgeport, Ct.

**Lathes, Wire Die Reaming—**  
Morgan Construction Co., Worcester, Mass.

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Lathes, Wood Turning—**  
J. C. Blount Co., Everett, Mass.

Fox Machine Co., Grand Rapids, Mich.

**Lathes, Worm Threading—**  
Automatic Machine Co., Bridgeport, Ct.

**Launch Hardware—**  
W. & J. Tiebout, 118 Chambers St., New York.

**Laundry Drying Apparatus—**  
B. F. Sturtevant Co., Boston, Mass.

**Laundry Irons—**  
(See Irons, Laundry.)

**Lavatories—**  
Humphreys Mfg. Co., Mansfield, O.

**Lavatory Fittings and Legs—**  
(See Plumbing Supplies.)

**Lawn Fountains, Mowers, Rakes, &c.—**  
(See Fountains, Mowers, Rakes, &c.)

**Lawn Furniture—**  
(See Chairs and Settees, Lawn.)

**Lawn Shears—**  
(See Shears, Grass and Lawn.)

**Lead—**  
American Metal Co., 52 Broadway, N. Y.

Bethlehem Steel Co., So. Bethlehem, Pa.

Empire Metal Co., Syracuse, N. Y.

Hendricks Bros., 49 Cliff St., New York.

Theo. Hertz Metal Co., St. Louis, Mo.

Merchant & Evans Co., Philadelphia, Pa.

Pittsburgh White Metal Co., Pittsburgh.

Sandoval Zinc Co., 122 N. Peoria St., Chicago, Ill.

**Lead, Antimonial—**  
American Metal Co., 52 Broadway, N. Y.

New York Washer & Gasket Co., Brooklyn, N. Y.

**Lead Car Seals—**  
Theo. Hertz Metal Co., St. Louis, Mo.

**Lead Covers, Wire—**  
(See Wires, Electrical.)

**Lead Enamel Wire—**  
(See Wires, Electrical.)

**Lead Pencils, Pipe—**  
(See Pencils, Pipe.)

**Lead Pipe Machinery—**  
Farrell Foundry & Machine Co., Ansonia, Ct.

Thomas Prosser & Son, 26 Platt St., N. Y.

**Lead Sheet, Perforated—**  
Erdle Perforating Co., Rochester, N. Y.

Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.

Manhattan Perforated Metal Co., 237 Centre St., New York.

Chas. Mundt & Sons, 41-447 Pearl St., New York.

## Leaders, Cattle—

Covert Mfg. Co., Troy, N. Y.  
Oneida Community, Kenwood, N. Y.  
Reck, Stow & Wilcox Co., 27 Murray St., New York.  
Seymour Smith & Son, Oakville, Ct.

## Leads, Halter—

Covert Mfg. Co., Troy, N. Y.

**Leads, Lumber Marking—**  
Jos. Dixon Crucible Co., Jersey City, N. J.

**Leads, Sounding—**  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Leather Belt Lacing—**  
(See Belt Lacing, Leather.)

**Leather Belting Strips—**  
(See Belting Strips.)

**Leather, Clutch—**  
Graton & Knight Mfg. Co., Worcester, Mass.

**Leather, Friction—**  
Graton & Knight Mfg. Co., Worcester, Mass.

**Leather Harness—**  
Chas. A. Schieren & Co., 37 Ferry St., New York.

**Leather, Hydraulic—**  
Chas. A. Schieren & Co., 37 Ferry St., New York.

**Leather Scales—**  
(See Scales, Hide and Leather.)

**Leather, Scrap—**  
Graton & Knight Mfg. Co., Worcester, Mass.

**Leather Shears—**  
(See Shears, Rubber and Leather.)

**Leather Splitting Knives—**  
(See Knives, Machine.)

**Leather, Switchboard—**  
Graton & Knight Mfg. Co., Worcester, Mass.

**Leather Washers—**  
(See Washers, Leather.)

**Leathers, Pump—**  
American Well Works, Aurora, Ill.

Barnes Mfg. Co., Mansfield, O.

Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

Deming Co., Salem, O.

W. & R. Douglas, Middletown, Ct.

Goulds Mfg. Co., Seneca Falls, N. Y.

Graton & Knight Mfg. Co., Worcester, Mass.

Humphreys Mfg. Co., Mansfield, O.

Mast, Foos & Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

**Legs and Lavatory Fittings—**  
(See Plumbing Supplies.)

**Legs, Counter—**  
S. Cheney & Son, Manlius, N. Y.

Wrightsville Hardware Co., Wrightsville, Pa.

**Lemon Squeezers—**  
(See Squeezers, Lemon.)

**Letter Binders and Openers—**  
(See Binders, Openers.)

**Letter Plates, Drop—**  
(See Plates, Drop Letter.)

**Letter Scales—**  
(See Scales, Letter, Silver Plated.)

**Letter Trays—**  
(See Trays, Wire, Paper and Letter.)

**Letters and Figures, Brass—**  
(See Letters and Figures, Pattern.)

**Letters and Figures, Burning Brand—**

A. G. Butler, 234-236 Pearl St., N. Y.  
Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.

**Letters and Figures, House, &c.—**

American Railway Supply Co., 24 Park  
Place, New York.  
Arcade Mfg. Co., Freeport, Ill.  
Chas. H. Besly & Co., 15-21 S. Clinton  
St., Chicago, Ill.  
Chicago Spring Butt Co., Chicago, Ill.  
Cleveland Galvanizing Works Co., Cleve-  
land, O.  
Goodwin & Kintz Co., Winsted, Ct.  
Geo. M. Ness, Jr., 61 Fulton St., N. Y.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.  
Schwerdtle Stamp Co., Bridgeport, Ct.  
Taylor & Boggis Foundry Co., Cleve-  
land, O.  
Turner Brass Works, Sycamore, Ill.  
W. & J. Tiebout, 113 Chambers St., N. Y.  
Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Letters and Figures, Pattern—**

A. G. Butler, 234-236 Pearl St., New York.  
Cleveland Galvanizing Works Co., Cleve-  
land, O.  
Geo. M. Ness, Jr., 61 Fulton St., N. Y.  
S. Obermayer Co., Cincinnati, O.  
Oliver Machinery Co., Grand Rapids,  
Mich.  
Osborn Mfg. Co., Cleveland, O.  
J. W. Faxon Co., Philadelphia, Pa.  
St. Louis Electrotype Foundry, St. Louis.  
Schwerdtle Stamp Co., Bridgeport, Ct.  
Turner Brass Works, Sycamore, Ill.

**Letters and Figures, Steel—**

A. G. Butler, 234-236 Pearl St., New  
York.  
Cleveland Galvanizing Works Co., Cleve-  
land, O.  
Hoggon & Pettis Mfg. Co., New Haven,  
Ct.  
E. Konigslow Stamping & Tool Works,  
Cleveland, O.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.  
Geo. M. Ness, Jr., 61 Fulton St., N. Y.  
Russell & Schutte, 90 West St., N. Y.  
Wiebusch & Hilger Ltd., 106-110 Lafay-  
ette St., New York.

**R. Woodman Mfg. & Supply Co., Boston.**

**Letters and Figures, White Metal—**  
(See Letters and Figures, Pattern.)

**Level Sights—**  
Stanley Rule & Level Co., New Britain,  
Ct.

**Levelers and Graders, Road—**

Kilbourne & Jacobs Mfg. Co., Colum-  
bus, O.  
Syracuse Chilled Plow Co., Syracuse, N. Y.  
**Leveling and Squaring In-  
struments—**  
(See Instruments, Leveling and Squaring.)

**Leveling Machines, Sheet Metal—**

United Engineering & Foundry Co., Pitts-  
burgh, Pa.

**Leveling Rods, Poles—**  
(See Rods, Poles.)

**Levels, Adjustable Bench—**  
Goodell-Pratt Co., Greenfield, Mass.

**Levels and Plumbs—**  
(See Plumbs and Levels.)

**Levels, Bit and Square—**  
Stanley Rule & Level Co., New Brit-  
ain, Ct.

**Levels, Cross—**  
L. S. Starrett Co., Athol, Mass.

**Levels, Engineers—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Levels, Hand Bench—**  
C. E. Jennings & Co., 42 Murray St.,  
New York.

**Levels, Iron—**  
Henry Disston & Sons, Philadelphia, Pa.

Goodell-Pratt Co., Greenfield, Mass.  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Millers Falls Co., 28 Warren St., N. Y.  
Stanley Rule & Level Co., New Brit-  
ain, Ct.

**L. S. Starrett Co., Athol, Mass.**  
(See also Plumbs and Levels.)

**Levels, Machinists—**

Baker, McMillen Co., Akron, O.  
Chapin-Stephens Co., Pine Meadow, Ct.  
Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.  
L. S. Starrett Co., Athol, Mass.

**Levels, Masons—**

Baker, McMillen Co., Akron, O.  
Chapin-Stephens Co., Pine Meadow, Ct.

**Levels, Paper Hangers—**

Webster & Perks Tool Co., Springfield, O.

**Levels, Plane Tables, Sextants, &c.—**  
(See Surveying Instruments.)

**Levels, Plumbers—**

Goodell-Pratt Co., Greenfield, Mass.  
L. S. Starrett Co., Athol, Mass.

**Levels, Pocket—**

Baker, McMillen Co., Akron, O.  
Chapin-Stephens Co., Pine Meadow, Ct.  
Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.

Keuffel & Esser Co., 127 Fulton St., N. Y.  
National Saw Co., Newark, N. J.  
Stanley Rule & Level Co., New Brit-  
ain, Ct.

**L. S. Starrett Co., Athol, Mass.**

**Levels, Railroad Track—**  
Sheffield Car Co., Three Rivers, Mich.

**Levels, Shafting—**

Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
L. S. Starrett Co., Athol, Mass.

**Levels, Y—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Levels, Brake—**

New Castle Forge & Bolt Co., New  
Castle, Pa.

**Levels, Door Bell—**

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.  
Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Lever, Machine—**

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Standard Welding Co., Cleveland, O.

**Lewin, Stone—**

Trow & Holden, Barre, Vt.

**Lids, Journal Box, Pressed Steel—**

Union Spring & Mfg. Co., New Kensington, Pa.

**Lift Pumps—**

(See Pumps, Lift.)

**Lifters, Crown and Seal Stopper—**

Erie Specialty Co., Erie, Pa.

**Lifters, Drop Press and Hammer—**

E. W. Bliss Co., Brooklyn, N. Y.  
Miner & Peck Mfg. Co., New Haven, Ct.  
George A. Ohl & Co., Newark, N. J.

**Lifters, Pan and Pot—**

Adell Bros. Mfg. Co., Orange, Mass.

Arcade Mfg. Co., Freeport, Ill.  
Dover Stamping & Mfg. Co., Cambridge, Mass.

Lasher Mfg. Co., Davenport, Ia.

Luther Bros. Co., Milwaukee, Wis.

Standard Wire Co., New Castle, Pa.

**Lifters, Sash—**

Arcade Mfg. Co., Freeport, Ill.

Griffin Mfg. Co., Erie, Pa.

H. B. Ives Co., New Haven, Ct.

Lawrence Bros., Sterling, Ill.

McKinney Mfg. Co., Allegheny, Pa.

National Mfg. Co., Sterling, Ill.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Shelby Spring Hinge Co., Shelby, O.

Stanley Works, New Britain, Ct.

Taylor & Boggis Foundry Co., Cleveland.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Lifters, Shutter—**

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Lifters, Stove Lid—**

Arcade Mfg. Co., Freeport, Ill.

Columbia Grey Iron Co., Columbia, Pa.

Ireland & Matthews Mfg. Co., Detroit, Mich.

Morgan Spring Co., Worcester, Mass.

New York Stamping Co., Brooklyn, N. Y.

Wrightsville Hardware Co., Wrightsville, Pa.

**Lifters, Tire, Automobile—**

Long & Mann Co., Rochester, N. Y.

**Lifters, Transom—**

Boston Pressed Metal Co., Worcester, Mass.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Lifters, Trunk—**

J. H. Sessions & Son, Bristol, Ct.

J. G. Speidel, Reading, Pa.

**Lifters, Window Screen—**

Parker Wire Goods Co., Worcester, Mass.  
Goods Co., Worcester, Mass.

**Lifting Handles—**  
(See Handles.)

**Lifts, Acid—**

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

**Lifts, Invalid—**

J. G. Speidel, Reading, Pa.

Storm Mfg. Co., Newark, N. J.

**Lifts, Motor Armature—**

Duff Mfg. Co., Pittsburgh, Pa.

**Lifts, Sidewalk—**

(See Hoists, Sidewalk.)

**Light Machinery—**

(See Model and Experimental Work.)

**Lighters, Gas, Electric—**

W. R. Ostrander & Co., 22 Dey St., N. Y.

**Lighting Systems, Gasoline—**

American Gas Machine Co., Albert Lea, Minn.

**Lightning Arresters—**

(See Arresters, Lightning.)

**Lightning Rod Fixtures—**

Cleveland Galvanizing Works, Cleveland.

**Lightning Rods—**

Wright Wire Co., Palmer, Mass.

**Lights, Side and Deck—**

W. & J. Tiebout, 118 Chambers St., N. Y.

**Lights, Sidewalk—**

(See Iron Work, Builders.)

**Lignumvitae, in Log—**

Boston & Lockport Block Co., East Boston, Mass.

**Limestone—**

Columbus Iron & Steel Co., Columbus, O.

**Limestone, Crushed—**

Reed F. Blair & Co., Pittsburgh, Pa.

**Line Cleats, Grips—**

(See Cleats, Grips.)

**Liners, Locomotive Guide—**

L. S. Starrett Co., Athol, Mass.

**Liners, Section—**

Keuffel & Esser Co., 17 Fulton St., N. Y.

L. S. Starrett Co., Athol, Mass.

**Lines, Chalk, Masons', &c.—**

Samson Cordage Works, Boston, Mass.

Silver Lake Co., Boston, Mass.

Turner & Stanton Co., Norwich, Ct.

**Lines, Clothes, Cotton, &c.—**

Estes Mills, Fall River, Mass.

Samson Cordage Works, Boston, Mass.

Silver Lake Co., Boston, Mass.

Turner & Stanton Co., Norwich, Ct.

**Lines, Clothes, Manila and Sisal—**

Plymouth Cordage Co., North Plymouth, Mass.

**Lines, Clothes, Wire—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Dufur & Co., Baltimore, Md.

Malin & Co., Cleveland, O.

Parker Wire Goods Co., Worcester, Mass.

Williamsport Wire Rope Co., Williams-

port, Pa.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Lines, Fishing—**

Clark-Horrock's Co., Utica, N. Y.

Dame, Stoddard & Co., Boston, Mass.

**Lines, Garden—**

Samson Cordage Works, Boston, Mass.

Silver Lake Co., Boston, Mass.

Turner & Stanton Co., Norwich, Ct.

**Lines, Tent and Awning—**

Silver Lake Co., Boston, Mass.

**Lines, Towing—**  
New York Cordage Co., 83-85 Wall St., N.Y.

**Linings, Car Head—**  
Asbestos Protected Metal Co., Canton, Mass.

**Linings, Cement Rotary Kiln—**

(See Bricks.)

**Linings, Cupola—**  
J. Gilmour, Bennett Bldg., New York.  
Northern Engineering Works, Detroit, Mich.

S. Obermayer Co., Cincinnati, O.  
J. W. Parson Co., Philadelphia, Pa.  
M. D. Valentine & Bro. Co., Woodbridge, N. J.  
Whiting Foundry Equipment Co., Harvey, Ill.

**Linings, Dress, Crinoline—**  
I. E. Palmer Co., Middletown, Ct.

**Linings, Fire Place—**  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

**Link Belting, Chain—**  
(See Belting, Chain Link.)

**Links, Bed—**  
Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
Morgan Spring Co., Worcester, Mass.  
E. H. Titchener & Co., Binghamton, N. Y.

**Links, Car Coupling—**  
Keystone Drop Forge Works, Chester, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
Standard Chain Co., Pittsburgh, Pa.

**Links, Chain—**  
(See Chain Links.)

**Links, Fusible—**  
M. Lanz & Sons, Pittsburgh, Pa.

**Links, Repair and Lap—**  
Keystone Drop Forge Works, Chester, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
Thomas Laughlin Co., Portland, Me.  
New Castle Forge & Bolt Co., New Castle, Pa.

Oneida Community, Kenwood, N. Y.  
Standard Chain Co., Pittsburgh, Pa.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Linoleum Machinery—**  
Farrel Foundry & Mach. Co., Ansonia, Ct.  
Thomas Prosser & Son, 26 Platt St., N.Y.

**Linotype Metal—**  
Empire Metal Co., Syracuse, N. Y.  
Theo. Hertz Metal Co., St. Louis, Mo.  
Merchant & Evans Co., Philadelphia, Pa.  
Pittsburgh White Metal Co., Pittsburgh, Pa.

**Lintles—**  
(See Architectural Sheet Metal Work.)

**Liquid Soap Dispensers—**  
(See Dispensers, Liquid Soap.)

**Loaders, Hay—**  
(See Haying Tools.)

**Loaders, Horse, Car—**  
Kilbourn & Jacoby Mfg. Co., Columbus, O.

**Loaders, Log—**  
Browning Engineering Co., Cleveland, O.

**Lock and Coasters, Combined, Bicycle—**  
(See Brakes, Coaster, Bicycle.)

**Lock Corner Cutters—**  
(See Cutters, Lock Corner.)

**Lock Nuts—**  
(See Nuts, Lock.)

**Lockers, Office, Gymnasium, Store and Shop—**

Buffalo Wire Works Co., Buffalo, N. Y.  
W. J. Clark Co., Salem, O.  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Durand Steel Locker Co., American Trust Bldg., Chicago, Ill.  
Gem Mfg. Co., Boston, Mass.

General Fire Proofing Co., Youngstown, O.  
Glen Mfg. Co., Ellwood City, Pa.  
Hart & Cooley Co., New Britain, Ct.

Manufacturing Equipment & Engineering Co., Boston, Mass.  
Fred J. Meyers Mfg. Co., Hamilton, O.

Michigan Wire Cloth Co., Detroit, Mich.  
Terrell's Equipment Co., Grand Rapids, Mich.

Van Dorn Iron Works Co., Cleveland, O.  
Wright Wire Co., Worcester, Mass.

**Locks and Handles, Store Door—**  
(See Handles and Locks, Store Door.)

**Locks and Latches, Barn Door—**

Arcade Mfg. Co., Freeport, Ill.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Lawrence Bros., Sterling, Ill.

National Mfg. Co., Sterling, Ill.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Richards Mfg. Co., Aurora, Ill.

**Locks and Latches, Ship—**  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

W. & J. Tiebout, 118 Chambers St., N. Y.

**Locks and Latches, Sliding Door—**

Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Lane Bros. Co., Poughkeepsie, N. Y.  
Louden Machinery Co., Fairfield, Ia.

Reading Hardware Co., Reading, Pa.  
Richards Mfg. Co., Aurora, Ill.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Yale & Towne Mfg. Co., 9 Murray St., N.Y.

**Locks and Trimmings, Car—**

H. B. Ives Co., New Haven, Ct.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Locks, Automobile and Carriage—**

Walter W. Woodruff & Sons Co., Mount Carmel, Ct.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Locks, Bank—**

Yale & Towne Mfg. Co., 9 Murray St., N.Y.

**Locks, Basement Window—**

Shelby Spring Hinge Co., Shelby, O.

**Locks, Bicycle—**

Ames Sword Co., Chicopee, Mass.  
Eagle Lock Co., Terryville, Ct.  
John H. Graham & Co., 115 Chambers St., New York.

Miller Lock Co., Philadelphia, Pa.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Locks, Box—**  
Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.

**Locks, Buckle—**

Eagle Lock Co., Terryville, Ct.

**Locks, Cabinet—**

Eagle Lock Co., Terryville, Ct.

Miller Lock Co., Philadelphia, Pa.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Car Window—**

Reading Hardware Co., Reading, Pa.

Russell &amp; Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Locks, Chest—**

Miller Lock Co., Philadelphia, Pa.

**Locks, Combination Post Office Box—**

Eagle Lock Co., Terryville, Ct.

Miller Lock Co., Philadelphia, Pa.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Cupboard—**

Miller Lock Co., Philadelphia, Pa.

**Locks, Dial, Fireproof Safe—**

Eagle Lock Co., Terryville, Ct.

**Locks, Dog Collar—**

(See Locks, Pad.)

**Locks, Elevator Door—**

Chisholm &amp; Moore Mfg. Co., Cleveland.

Reading Hardware Co., Reading, Pa.

Russell &amp; Erwin Mfg. Co., 94-98 Lafayette St., New York.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Factory and Mill—**

Eagle Lock Co., Terryville, Ct.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Latches, &c.—**

Eagle Lock Co., Terryville, Ct.

Miller Lock Co., Philadelphia, Pa.

National Mfg. Co., Sterling, Ill.

Reading Hardware Co., Reading, Pa.

Russell &amp; Erwin Mfg. Co., 94-98 Lafayette St., New York.

Taylor &amp; Boggis Foundry Co., Cleveland.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Locker—**

Eagle Lock Co., Terryville, Ct.

Miller Lock Co., Philadelphia, Pa.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Masterkeyed—**

Eagle Lock Co., Terryville, Ct.

Miller Lock Co., Philadelphia, Pa.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Pad—**

Ames Sword Co., Chicopee, Mass.

Eagle Lock Co., Terryville, Ct.

Miller Lock Co., Philadelphia, Pa.

Russell &amp; Erwin Mfg. Co., 94-98 Lafayette St., New York.

Smith &amp; Egge Mfg. Co., Bridgeport, Ct.

W. &amp; J. Tiebout, 118 Chambers St., N. Y.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Pad, Carded Assortments—**

Eagle Lock Co., Terryville, Ct.

Miller Lock Co., Philadelphia, Pa.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Prison—**

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Railroad Switch—**

Eagle Lock Co., Terryville, Ct.

Miller Lock Co., Philadelphia, Pa.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Safe Deposit—**

Eagle Lock Co., Terryville, Ct.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Sash—**

Caldwell Mfg. Co., Rochester, N. Y.

H. B. Ives Co., New Haven, Ct.

National Mfg. Co., Sterling, Ill.

Peck, Stow &amp; Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell &amp; Erwin Mfg. Co., 94-98 Lafayette St., New York.

Shelby Spring Hinge Co., Shelby, O.

Taylor &amp; Boggis Foundry Co., Cleveland.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locks, Sash and Ventilating—**

H. B. Ives Co., New Haven, Ct.

Lawson Mfg. Co., 40 Dearborn St., Chicago, Ill.

**Locks, Sewing Machine—**

Eagle Lock Co., Terryville, Ct.

**Locks, Trunk, Case and Bag—**

Eagle Lock Co., Terryville, Ct.

R. C. Jenkinson &amp; Co., Newark, N. J.

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Locomotive Blocks, Reflectors, Transfer Tables—**

(See Blocks, Reflectors, Transfer Tables.)

**Locomotive Clocks—**

(See Clocks, Locomotive.)

**Locomotive Jacket Steel Sheets—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

**Locomotive Liners—**

L. S. Starrett Co., Athol, Mass.

**Locomotive Netting—**

(See Netting, Wire.)

**Locomotive Spark Arrestor Plates—**

Erdle Perforating Co., Rochester, N. Y.

Harrington &amp; King Perforating Co., 224

N. Union St., Chicago, Ill.

Charles Mundt &amp; Sons, 441 Pearl St., New York.

W. S. Tyler Co., Cleveland, O.

**Locomotive Works Machinery—**

Cincinnati Shaper Co., Cincinnati, O.

Hilles &amp; Jones Co., Wilmington, Del.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

**Locomotives, Electric—**

Atlas Car &amp; Mfg. Co., Cleveland, O.

General Electric Co., Schenectady, N. Y.

C. W. Hunt Co., West New Brighton, N. Y.

Jeffrey Mfg. Co., Columbus, O.

Arthur Koppel Co., Pittsburgh, Pa.

Wellman-Seaver-Morgan Co., Cleveland.

Westinghouse Electric &amp; Mfg. Co., Pittsburgh, Pa.

Ernst Wiener Co., Church and Fulton  
Sta., New York.  
Youngstown Car Mfg. Co., Youngstown, O.

**Locomotives, Gasoline—**

Shelfield Car Co., Three Rivers, Mich.  
Ernst Wiener Co., Church and Fulton  
Sta., New York.

**Locomotives, Industrial—**

Davenport Locomotive Works, Davenport,  
Ia.

Ernst Wiener Co., Church and Fulton  
Sta., New York.

**Locomotives, Steam—**

Atlas Car & Mfg. Co., Cleveland, O.  
Davenport Locomotive Works, Davenport,  
Ia.

Arthur Koppel, Pittsburgh, Pa.

Ernst Wiener Co., Church and Fulton  
Sta., New York.

**MERCHANTS.**

Carlin Machinery & Supply Co., Inc.,  
N. S. Pittsburgh, Pa.

Thomas P. Conard & Co., 119 S. 4th St.,  
Philadelphia, Pa.

Dallett & Co., Harrison Bldg., Philadel-  
phia, Pa.

Barclay M. Everson, Pittsburgh, Pa.

Ernest Law & Co., 15th & Market Sts.,  
Philadelphia, Pa.

McDowell & Co., Allegheny, Pa.

L. F. Seyfert's Sons, Inc., 437-441 N. 3d  
St., Philadelphia, Pa.

Southern Iron & Equipment Co., Atlanta,  
Ga.

Wickes Bros., Saginaw, Mich.

**Lodge Bells—**

(See Bells, Altar and Lodge.)

**Log and Lumber Rolls—**

Lane Mfg. Co., Montpelier, Vt.

**Log and Lumber Tools—**

Browning Engineering Co., Cleveland, O.

Kilborn & Bishop Co., New Haven, Ct.

Lidgerwood Mfg. Co., 96 Liberty St., N. Y.

Wickes Bros., Saginaw, Mich.

**Log Binders, Chains—**

(See Binders, Chains.)

**Log Hauls—**

Broderick & Bascom Rope Co., St. Louis.

Jeffrey Mfg. Co., Columbus, O.

Lane Mfg. Co., Montpelier, Vt.

A. Leschen & Sons Rope Co., St. Louis.

Lidgerwood Mfg. Co., 96 Liberty St., N. Y.

Soule Steam Feed Works, Meridian, Miss.

Wickes Bros., Saginaw, Mich.

Woodward, Wight & Co., Ltd., New Or-  
leans, La.

**Log Jacks—**

(See Jacks, Log.)

**Log Turners—**

Wickes Bros., Saginaw, Mich.

**Log Unloaders—**

Lane Mfg. Co., Montpelier, Vt.

**Logging and Driving**

**Tools—**

(See Tools, Lumber, also Log and Lum-  
ber Tools.)

**Logs, Marine—**

Riggs & Bro., 310 Market St., Philadel-  
phia, Pa.

**Loom Bolts—**

(See Bolts, Loom.)

**Loom Repair Parts—**

Boston Pressed Metal Co., Worcester,  
Mass.

Homier F. Livermore, Boston, Mass.

**Looms, Duck—**

Poole Engineering & Machine Co., Balti-  
more, Md.

**Loops and Squares, Wire—**

R. C. Jenkinson & Co., Newark, N. J.

**Loops, Asbestos—**

Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.

**Loops, Bag and Case—**

Eagle Lock Co., Terryville, Ct.

**Loops, Footman—**

North & Judd Mfg. Co., New Britain, Ct.

**Loops, Furniture—**

(See Staples and Loops, Furniture.)

**Loops, Garment Hanger—**

(See Bars and Loops.)

**Loops, Snap—**

North & Judd Mfg. Co., New Britain, Ct.

**Loops, Trunk—**

J. H. Sessions & Son, Bristol, Ct.

**Looseners, Tire, Automobile—**

Long & Mann Co., Rochester, N. Y.

**Lopping Pruners—**

(See Pruners, Tree.)

**Lubricants—**

(See also Grease, Axle.)

Jos. Dixon Crucible Co., Jersey City, N. J.

International Acheson Graphite Co., Ni-  
agara Falls, N. Y.

Robins Conveying Belt Co., 17-22 Park  
Row, New York.

**Lubricants, Automobile—**

Joseph Dixon Crucible Co., Jersey City,  
N. J.

International Acheson Graphite Co., Ni-  
agara Falls, N. Y.

**Lubricants, Ball Bearing—**

International Acheson Graphite Co., Ni-  
agara Falls, N. Y.

**Lubricants, Fire Arm—**

International Acheson Graphite Co., Ni-  
agara Falls, N. Y.

**Lubricants, Gear—**

Joseph Dixon Crucible Co., Jersey City,  
N. J.

International Acheson Graphite Co., Ni-  
agara Falls, N. Y.

**Lubricants, Rope—**

Broderick & Bascom Rope Co., St. Louis.

A. Leschen & Sons Rope Co., St. Louis.

**Lubricants, Wire Rope—**

Broderick & Bascom Rope Co., St. Louis.

Joseph Dixon Crucible Co., Jersey City,  
N. J.

International Acheson Graphite Co., Ni-  
agara Falls, N. Y.

A. Leschen & Sons Rope Co., St. Louis.

**Lubricators—**

Charles H. Besly & Co., 15-21 S. Clinton  
St., Chicago, Ill.

Crosby Steam Gage & Valve Co., Boston.

Eynon-Evans Mfg. Co., 1507 Clearfield  
St., Philadelphia, Pa.

Gem Mfg. Co., Pittsburgh, Pa.

Lunkenheimer Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

National Sewing Machine Co., Belvidere,  
Ill.

Wm. Powell Co., Cincinnati, O.

Walworth Mfg. Co., Boston, Mass.

**MERCHANTS.**

Industrial Supply & Equipment Co., 407  
Sansom St., Philadelphia, Pa.

**Lubricators, Automobile Mechanical—**

Lunkenheimer Co., Cincinnati, O.

**Lubricators, Cylinder—**

Lunkenheimer Co., Cincinnati, O.

Wm. Powell Co., Cincinnati, O.

**Lubricators, Mechanical Pump—**

Lunkenheimer Co., Cincinnati, O.

**Lugs or Clamps, Automobile Tire—**

Clark Novelty Co., Rochester, N. Y.

**Lugs, Tank—**

M. Lanz &amp; Sons, Pittsburgh, Pa.

Racine Tank Lug Co., Racine, Wis.

Winship Mfg. Co., Racine, Wis.

**Lumber—**

C. C. Putnam &amp; Son, Putnamville, Vt.

**Lumber Crayons—**

(See Crayons, Lumber, Marble, Metal Workers', &amp;c.)

**Lumber, Dressed—**

C. C. Putnam &amp; Son, Putnamville, Vt.

**Lumber Tools, &c.—**

(See Tools, &amp;c.)

**Machetes—**

Henry Disston &amp; Sons, Philadelphia, Pa.

**Machine Bolts—**

(See Bolts, Machine.)

**Machine Handles, Knives, Levers, Screws—**

(See Handles, Knives, Levers, Screws.)

**Machine Parts, Hardened and Ground—**

(See Screw Machine Products, Hardened and Ground.)

**Machinery is classified under the headings descriptive of character thereof.****Machinery Dealers—**

Baird Machinery Co., Pittsburgh, Pa.

W. R. Beatty Machinery &amp; Equipment Co., Pittsburgh, Pa.

Charles Behlen, 72 Trinity Pl., New York.

Geo. Bender, 82 Centre St., New York.

Brown &amp; Zortman Machinery Co., Pittsburgh, Pa.

Chandler &amp; Farquhar Co., Boston, Mass.

Chicago House Wrecking Co., W. 35th &amp; Iron Sts., Chicago, Ill.

Thomas P. Conard &amp; Co., 119 S. 4th St., Philadelphia, Pa.

W. P. Davis Mach. Co., Rochester, N. Y.

Eagle Metal &amp; Supply Co., Brooklyn, N. Y.

E. L. Essley Machinery Co., 67 W. Washington St., Chicago, Ill.

Barclay M. Everson, Pittsburgh, Pa.

Garvin Machine Co., Spring &amp; Varick Sts., New York.

Hannan-Finton Co., Springfield, Mass.

Hill, Clarke &amp; Co., Boston, Mass.

Cal. Hirsch &amp; Sons Iron &amp; Rail Co., St. Louis, Mo.

Henry A. Hitner's Sons Co., Huntingdon and Aramingo Aves., Philadelphia, Pa.

C. B. Houston &amp; Co., Girard Bldg., Philadelphia, Pa.

Humphrey Machine Co., Keene, N. H.

Irving Mfg. &amp; Tool Co., 157 Chambers St., New York.

W. C. Johnson &amp; Sons Machinery Co., St. Louis, Mo.

J. McCabe, 14 Dey St., New York.

McCabe Machine Co., 95 Liberty St., New York.

Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.

McCoy &amp; Brandt, Pittsburgh, Pa.

McDowell &amp; Co., Allegheny, Pa.

McDowell, Stocker &amp; Co., 59-61 So. Canal St., Chicago, Ill.

Manning, Maxwell &amp; Moore, Inc., 85-89 Liberty St., New York.

Marshall &amp; Huschart Machinery Co., 62-64 So. Canal St., Chicago, Ill.

Henry J. Miller's Sons, Bridgewater, Mass.

Edgar M. Moore &amp; Co., Pittsburgh, Pa.

Motch &amp; Merryweather Machinery Co., Cleveland, O.

R. Munroe &amp; Sons Mfg. Corporation, Pittsburgh, Pa.

Wm. S. Nicholls, 253 Broadway, N. Y.

Niles-Bement-Pond Co., 111 Broadway, New York.

Northern Engineering Works, Detroit, Mich.

Perkins &amp; Frecker, 136 Liberty St., N. Y.

Pfannmueller Engineering Co., First National Bank Bldg., Chicago, Ill.

F. R. Phillips &amp; Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

Power Equipment Co., Fisher Bldg., Chicago, Ill.

Prentiss Tool &amp; Supply Co., 115 Liberty St., New York.

Thomas Prosser &amp; Son, 26 Platt St., N. Y.

Joseph T. Ryerson &amp; Son, 18-22 Milwaukee Ave., Chicago, Ill.

F. P. Schielein Machinery Co., Pittsburgh, Pa.

Schuchardt &amp; Schutte, 90 West St., N. Y.

Scully Steel &amp; Iron Co., 69 N. Halsted St., Chicago, Ill.

L. F. Seyfert's Sons, Inc., 437-441 No. 3d St., Philadelphia, Pa.

Shook &amp; Fletcher, Birmingham, Ala.

H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.

Taylor Machinery Co., Boston, Mass.

Thomas &amp; Lowe Machinery Co., Providence, R. I.

Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.

Jacob Ullman, Buffalo, N. Y.

Vandysk, Churchill Co., 8 Dey St., N. Y.

Walsh's Sons &amp; Co., Newark, N. J.

A. O. Walworth &amp; Co., 143-147 Clinton St., Chicago, Ill.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

Woodward, Wight &amp; Co., Ltd., New Orleans, La.

C. C. Wormer Machy. Co., Detroit, Mich.

**Machinery, Electric Mining—**

General Electric Co., Schenectady, N. Y.

Westinghouse Electric &amp; Mfg. Co., Pittsburgh, Pa.

**Machinery, Glue Room—**

Advance Machinery Co., Toledo, O.

**Machinery, Mining—**

(See Mining Machinery.)

**Machinery, Range and Furnace Builders—**

(See Range and Furnace Builders' Machinery.)

**Machinery, Second Hand—**  
(See Second Hand Machinery.)  
**Machinery, Special—**  
(See Special Machinery.)  
**Machines, Annealing—**  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
**Machines, Bench Center—**  
(See Testing Machines, Bench Center.)  
**Machines, Boring—**  
(See Mills, Boring and Turning; also Boring Machines, Carpenters'.)  
**Machines, Calculating—**  
(See Calculating Machines.)  
**Machines, Coffee—**  
(See Percolators, Coffee.)  
**Machines, Counting—**  
(See Counting Machines.)  
**Machines, Dovetailing—**  
(See Dovetailing Machines.)  
**Machines, Painting and Whitewashing—**  
(See Paint and Whitewash Spraying Machines.)  
**Machines, Pie—**  
(See Bakers' and Confectioners' Tools, Machines, &c.)  
**Machines, Reckoning—**  
(See Adding, Computing and Reckoning Machines.)  
**Machines, Washing—**  
(See Washing Machines.)  
**Machinists' Clamps—**  
(See Clamps, Steel.)  
**Machinists' Clamps, Rules, Scrapers, Squares—**  
(See Clamps, Rules, Scrapers, Squares.)  
**Magazine, Publishers—**  
System, 151-153 Wabash Ave., Chicago, Ill.  
**Magnesite, Dead Burned—**  
American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.  
**Magnesium—**  
American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.  
C. W. Leavitt & Co., 30 Church St., N.Y.  
Roessler & Hasslacher Chemical Co., 100 William St., New York.  
**Magnesium Copper—**  
Roessler & Hasslacher Chemical Co., 100 William St., New York.  
**Magnet Hammers—**  
(See Hammers.)  
**Magnet Wire—**  
(See Wires, Electrical.)  
**Magnetic Separators—**  
(See Separators, Magnetic.)  
**Magnets—**  
Northern Engineering Works, Detroit Mich.  
Schuchardt & Schutte, 90 West St., N.Y.  
**Magnets, Lifting—**  
Electric Controller & Mfg. Co., Cleveland, O.  
Northern Engineering Works, Detroit, Mich.  
**Mail Boxes, Catchers—**  
(See Boxes, Catchers.)  
**Malleable Clevises, Hooks and Eyes, Rings—**  
(See Clevises, Hooks and Eyes, Rings.)  
**Malleable D's—**  
(See D's, Malleable Shovel and Spade.)  
**Malleable Iron Castings, Hinges—**  
(See Castings, Hinges.)

**Mallets, Calking—**  
W. & J. Tebout, 118 Chambers St., N. Y.  
**Mallets, Copper—**  
U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.  
**Mallets, Rawhide Capped—**  
New Process Raw Hide Co., Syracuse, N. Y.  
**Mallets, Rubber—**  
New York Belting & Packing Co., 91-93 Chambers St., New York.  
Osborn Mfg. Co., Cleveland, O.  
S. Obermayer Co., Cincinnati, O.  
J. W. Paxson Co., 1621 N. Delaware Ave., Philadelphia, Pa.  
**Mallets, Wooden—**  
Baker, McMillen Co., Akron, O.  
W. R. Hartigan, Collinsville, Ct.  
Osborn Mfg. Co., Cleveland, O.  
J. W. Paxson Co., Philadelphia, Pa.  
Piqua Handle & Mfg. Co., Piqua, O.  
John Sommer Faucet Co., Newark, N. J.  
Stanley Rule & Level Co., New Britain, Ct.  
Union Hardware Co., Torrington, Ct.  
**Man Heads—**  
E. Keeler Co., Williamsport, Pa.  
Lukens Iron & Steel Co., Coatesville, Pa.  
Tudor Boiler Mfg. Co., Cincinnati, O.  
**Man Hole Boring Machines—**  
(See Boring Machines, Man Hole.)  
**Man Hole Castings—**  
(See Castings, Man Hole, Cistern, Sewer, &c.)  
**Mandrels—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
Cleveland Twist Drill Co., Cleveland, O.  
Henry Disston & Sons, Philadelphia, Pa.  
Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
W. H. Nicholson & Co., Wilkes-Barre, Pa.  
B. B. Noyes & Co., Greenfield, Mass.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Pratt & Whitney Co., Hartford, Ct.  
Standard Tool Co., Cleveland, O.  
Western Tool & Mfg. Co., Springfield, O.  
Whitman & Barnes Mfg. Co., Chicago, Wile & Russell Mfg. Co., Greenfield, Mass.  
**Mandrels, Lathe Expanding—**  
Earle Gear & Machine Co., Stenton & Wyoming Ave., Philadelphia, Pa.  
Wm. G. Le Count, East Norwalk, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
W. H. Nicholson & Co., Wilkes-Barre, Pa.  
Western Tool & Mfg. Co., Springfield, O.  
**Mandrels, Saw—**  
(See Arbors, Circular Saw.)  
**Mane Combs—**  
(See Combs, Mane and Tail.)  
**Manganese—**  
Goldschmidt Thermit Co., 90 West St., New York.



- C. W. Leavitt & Co., 30 Church St., N. Y.  
 Roessler & Hasslacher Chemical Co., 100  
 William St., New York.  
 Western Foundry Supply Co., 50 Church  
 St., New York.
- Manganese Bronze Cast-  
 ings, Forgings—**  
 (See Castings, Forgings, Bronze.)
- Manganese Bronze Ingots—**  
 (See Ingots.)
- Manganese-Copper—**  
 Roessler & Hasslacher Chemical Co., 100  
 William St., New York.  
 Western Foundry Supply Co., 50 Church  
 St., New York.
- Manganese Silicon, Electro-  
 lytic—**  
 Roessler & Hasslacher Chemical Co., 100  
 William St., New York.
- Mangers, Feed—**  
 S. Cheney & Son, Manlius, N. Y.  
 Fred J. Meyers Mfg. Co., Hamilton, O.  
 Nimmo Fence & Wire Works Co., Nor-  
 wood, O.  
 Stuart & Peterson Co., Burlington, N. J.  
 Warsaw Elevator Co., Warsaw, N. Y.  
 R. W. Whitehurst Co., Norfolk, Va.  
 (See also Stable Fixtures.)
- Manicure Goods—**  
 Clauss Shear Co., Fremont, O.  
 Liveright Bros., Philadelphia, Pa.  
 Frank Mossberg Co., Attleboro, Mass.  
 Mossberg Wrench Co., Central Falls,  
 R. I.
- Nicholson File Co., Providence, R. I.**
- Manicure Sets—**  
 (See Sets, Silver Plated.)
- Mantel Grates—**  
 (See Grates.)
- Manual Training School  
 Outfits—**  
 (See School Outfits, Manual Training.)
- Manufacturing Sites—**  
 J. H. Hillman & Son, Pittsburgh, Pa.
- Manure Forks, Hooks,  
 Pumps—**  
 (See Forks, Hooks, Pumps.)
- Marine Cableways—**  
 (See Cableways, Marine.)
- Marine Clocks—**  
 (See Clocks, Marine.)
- Marine Hardware—**  
 Thomas Laughlin Co., Portland, Me.  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
 Turner Brass Works, Sycamore, Ill.  
 Wilcox, Crittenden & Co., Inc., Middle-  
 town, Ct.
- Marine Railways—**  
 Poole Engineering & Machine Co., Bal-  
 timore, Md.
- Markers, Clapboard—**  
 Goodell-Pratt Co., Greenfield, Mass.  
 Otis A. Smith, Rockfall, Ct.  
 Stanley Rule & Level Co., New Britain, Ct.
- Markers, Corn and Row—**  
 Bateman Mfg. Co., Grenloch, N. J.
- Markers, Ice—**  
 (See Ice Harvesting Tools.)
- Markers, Tire—**  
 Wiley & Russell Mfg. Co., Greenfield,  
 Mass.
- Market Wire—**  
 (See Wire, Iron and Steel, &c.)
- Marking Gauges—**  
 (See Gauges.)
- Marlin Spikes—**  
 (See Spikes, Marlin, Pickers, &c.)
- Mashers and Beaters, Vege-  
 table—**  
 Lasher Mfg. Co., Davenport, Ia.
- Mashers, Vegetable, &c.—**  
 Andrews Wire & Iron Works, Rockford,  
 Ill.
- Columbia Grey Iron Co., Columbia, Pa.**  
**Erie Specialty Co., Erie, Pa.**  
**Goodell Co., Antrim, N. H.**  
**Wm. R. Hartigan, Collinsville, Ct.**  
**Kilbourne Mfg. Co., Troy, N. Y.**  
**John Sommer Faucet Co., Newark, N. J.**  
**Standard Wire Co., New Castle, Pa.**  
 (See also Kitchen Articles, Wire.)
- Masons' Chalk, &c., Lines—**  
 (See Lines, Chalk, &c.)
- Massage Machines—**  
 Coates Clipper Mfg. Co., Worcester, Mass.
- Match Boxes, Safes—**  
 (See Boxes, Safes.)
- Match Box Holders—**  
 (See Holders, Match Box.)
- Matchers, Wood—**  
 Lane Mfg. Co., Montpelier, Vt.
- Material, Old—**  
**Birdshoro Iron & Steel Breaking Co.,**  
**Ltd., Birdshoro, Pa.**  
**M. J. & M. Blake, 97 10th Ave., N. Y.**  
**L. I. Bregman & Co., First National**  
**Bank Bldg., Chicago, Ill.**  
**Thomas P. Conard & Co., 119 S. 4th St.,**  
**Philadelphia, Pa.**  
**Continental Iron & Steel Co., 66 Broad**  
**St., New York.**  
**Robert M. Cunliffe, 11th St. and Wash-**  
**ington Ave., Philadelphia, Pa.**  
**Dallett & Co., Harrison Bldg., Philadel-**  
**phia, Pa.**  
**Cal. Hirsch & Sons Iron & Rail Co., St.**  
**Louis, Mo.**  
**H. A. Hitner's Sons Co., Huntington St.**  
**and Aramingo Ave., Philadelphia, Pa.**  
**C. B. Houston & Co., Girard Bldg.,**  
**Philadelphia, Pa.**  
**Jos. Joseph & Bros. Co., Cincinnati, O.**  
**Jerome Keeley & Co., 421 Chestnut St.,**  
**Philadelphia, Pa.**  
**Ernest Law & Co., 15th & Market Sts.,**  
**Philadelphia, Pa.**  
**E. B. Leaf & Co., Real Estate Trust**  
**Bldg., Philadelphia, Pa.**  
**Jno. Leonard & Co., 229 Broadway, N. Y.**  
**Henry Lewis & Co., 26 So. 15th St., Phil-**  
**adelphia, Pa.**  
**McDowell & Co., Allegheny, Pa.**  
**W. G. McKenney & Co., Pittsburgh, Pa.**  
**J. J. Mohr, 131 S. 4th St., Philadelphia.**  
**Edgar M. Moore & Co., Pittsburgh, Pa.**  
**Edmund W. Mudge & Co., Pittsburgh,**  
**Pa.**  
**F. R. Phillips & Sons Co., Pennsylvania**  
**Bldg., Philadelphia, Pa.**  
**Filling & Crane, Girard Bldg., Philadel-**  
**phia, Pa.**  
**Plitt & Co., Real Estate Trust Bldg.,**  
**Philadelphia, Pa.**  
**Potts & Wittman North American Bldg.,**  
**Philadelphia, Pa.**  
**Richardson & Co., Inc., Pittsburgh, Pa.**  
**M. H. Rogers, Bridgeport Ct.**  
**Frank Samuel, 15th and Market Sts.,**  
**Philadelphia, Pa.**  
**Shook & Fletcher, Birmingham, Ala.**  
**Morton B. Smith Co., 243 Front St., N. Y.**

Jacob Ullman, Buffalo, N. Y.  
Walsh's Sons & Co., Newark, N. J.  
Wheeler, Mifflin & Co., Fidelity Bldg., Philadelphia, Pa.  
Wickes Bros., Saginaw, Mich.  
E. H. Wilson & Co., 112 No. Broad St., Philadelphia, Pa.  
L. & R. Wister & Co., Bullitt Bldg., Philadelphia, Pa.

**Mats and Matting, Rubber—**  
New York Belting & Packing Co., 91-93 Chambers St., New York.  
Springfield Tire & Rubber Co., Springfield, O.

**Mats and Matting, Wire and Steel—**  
Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.

Buffalo Wire Works Co., Buffalo, N. Y.  
Cary Mfg. Co., 19-21 Roosevelt St., N. Y.  
Clinton Wire Cloth Co., Clinton, Mass.  
Dufur & Co., Baltimore, Md.  
Estey Wire Works Co., 59 Fulton St., New York.

Glen Mfg. Co., Ellwood City, Pa.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
David Lupton's Sons Co., Westmoreland and Janney Sts., Philadelphia, Pa.  
Morgan Spring Co., Worcester, Mass.  
Nimmo Fence & Wire Works Co., Norwood, O.

Parker Wire Goods Co., Worcester, Mass.  
Standard Wire Co., New Castle, Pa.  
Wire Goods Co., Worcester, Mass.

**Mats, Table, Wire—**  
(See Household Articles, Wire.)

**Mattocks—**  
(See Picks.)

**Mattocks, Asphalt—**  
Hubbard & Co., Pittsburgh, Pa.

**Mattocks, Garden—**  
American Fork & Hoe Co., Cleveland, O.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.

**Mattocks, Pick—**  
Hubbard & Co., Pittsburgh, Pa.

**Mauls—**  
S. Cheney & Son, Manlius, N. Y.  
Heath Foundry & Mfg. Co., Plymouth, O.  
Hubbard & Co., Pittsburgh, Pa.  
Western Foundry & Sash Weight Co., 2d and Miller Sts., St. Louis, Mo.

**Mauls, Ship—**  
L. & J. White Co., Buffalo, N. Y.

**Measures, Board, Log and Wood—**  
Chapin-Stephens Co., Pine Meadow, Ct.  
Lufkin Rule Co., Saginaw, Mich.  
Stanley Rule & Level Co., New Britain, Ct.

**Measures, Dry—**  
Richmond Cedar Works, Richmond, Va.  
John Sommer Faucet Co., Newark, N. J.

**Measures, Grain—**  
W. J. Clark Co., Salem, O.

**Measures, Ice Cream—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.

**Measures, Lime—**  
W. J. Clark Co., Salem, O.

**Measures, Linear—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Stanley Rule & Level Co., New Britain, Ct.  
Upson Nut Co., Cleveland, O.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Measures, Liquid—**  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Dover Stamping & Mfg. Co., Cambridge, Mass.

**Measures, Tape—**  
John H. Graham & Co., 113 Chambers St., New York.

Keuffel & Esser Co., 127 Fulton St., N. Y.  
Lufkin Rule Co., Saginaw, Mich.  
Simonds Mfg. Co., Fitchburg, Mass.  
L. S. Starrett Co., Athol, Mass.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Measuring Faucets, Wheels—**  
(See Faucets, Wheels.)

**Measuring Rods, Standard, End—**

Brown & Sharpe Mfg. Co., Providence, R. I.  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Pratt & Whitney Co., Hartford, Ct.  
J. T. Slocum Co., Providence, R. I.

**Meat and Vegetable Choppers and Cutters—**  
(See Cutters, Food, Meat and Vegetable.)

**Meat Dishes—**  
(See Dishes, Silver Plated.)

**Meat Hooks, Presses—**  
(See Hooks, Presses.)

**Meat Juice Presses—**  
(See Presses, Fruit and Juice.)

**Meat Tenderers—**  
(See Pounders, Steak.)

**Mechanical Rubber Goods—**  
(See Rubber Goods, Mechanical.)

**Menders, Hose—**  
(See Hose Attachments.)

**Menders, Steel Tape—**  
Eyetlet Tool Co., Boston, Mass.

**Mending Plates—**  
(See Plates, Mending.)

**Merchants, Iron and Steel—**  
(See Iron and Steel Brokers and Merchants.)

**Merchants, Metal—**  
(See Iron and Steel, Brokers and Merchants.)

**Merry-Go-Rounds—**  
Arncliffe & Guinn, Springfield, N. Y.  
Taylor & Fenn Co., Hartford, Ct.

**Metal, Anti-Friction, Bronze, &c.—**  
(See Anti-Friction, Bronze, &c.)

**Metal Goods, Sheet, to Order—**  
(See Sheet Metal Goods, to Order.)

**Metal Lacquers—**  
(See Lacquers.)

**Metal, Perforated Sheet—**  
Clinton Wire Cloth Co., Clinton, Mass.  
Erdie Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 209 No. Union St., Chicago, Ill.  
Hendrick Mfg. Co., Carbondale, Pa.  
Indestructible Metal Co., 50 Church St., New York.

Manhattan Perforated Metal Co., 237 Centre St., New York.

Charles Mundt & Sons, 411-447 Pearl St., New York.

**Metal, Platers' or Gold—**  
Bridgeport Brass Co., 253 B'way, N. Y.

Homer F. Livermore, Boston, Mass.  
Riverside Metal Co., Riverside, N. J.  
Seymour Mfg. Co., Seymour, Ct.

**Metal Polish, Scrubbers—**  
(See Polish, Scrubbers.)

**Metal Shearing to Order—**  
Avery Stamping Co., Cleveland, O.

**Metal Specialties, Ornamental Sheet—**

Harvey Hubbell, Bridgeport, Ct.  
M. I. Smith, Bristol, Ct.

**Metal Specialties to Order—**  
Advance Mfg. Co., Racine Junction, Wis.  
American Tube & Stamping Co., Bridgeport, Ct.

Arrow Can Co., 35 Warren St., N. Y.

Avery Stamping Co., Cleveland, O.

Baird Machine Co., Oakville, Ct.

Bancroft & Co., Philadelphia, Pa.

Blake & Johnson Co., Waterbury, Ct.

Boston Pressed Metal Co., Worcester, Mass.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

A. N. Clark & Son, Plainville, Ct.

W. J. Clark & Co., Salem, O.

Clark Novelty Co., Rochester, N. Y.

Crosby Co., Buffalo, N. Y.

Eastern Machine & Stamping Co., Providence, R. I.

A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.

Gem Mfg. Co., Boston, Mass.

Gem Mfg. Co., Pittsburgh, Pa.

Geuder, Paeschke & Frey Co., Milwaukee, Wis.

Globe Machine & Stamping Co., Cleveland, O.

Grant Mfg. & Machine Co., Bridgeport, Ct.

Haven Malleable Castings Co., Cincinnati, O.

Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

Ireland & Matthews Mfg. Co., Detroit, Mich.

Janney, Steinmetz & Co., Drexel Bldg., Philadelphia, Pa.

Kilborn & Bishop Co., New Haven, Ct.

W. B. Knight Machinery Co., St. Louis, Mo.

E. Konigslow Stamping & Tool Works, Cleveland, O.

Otto Konigslow Mfg. Co., Cleveland, O.

Homer F. Livermore, Boston, Mass.

McKinney Mfg. Co., Allegheny, Pa.

H. A. Matthews Mfg. Co., Seymour, Ct.

Frank Mossberg Co., Attleboro, Mass.

Mossberg Wrench Co., Central Falls, R. I.

National Cycle Mfg. Co., Bay City, Mich.

Northwestern Consolidated Iron & Steel Mfg. Co., Burlington, Ia.

Ohio Brass Co., Mansfield, O.

Osborn Mfg. Co., Cleveland, O.

Parker Wire Goods Co., Worcester, Mass.

Phenix Mfg. Co., Milwaukee, Wis.

Randall Electric Welding Co., 40 W. 13th St., New York.

Richmond Forgings Corporation, Richmond, Va.

Richmond Foundry & Mfg. Co., Inc., Richmond, Va.

Robinson Tool Works, Waterbury, Ct.

Arthur T. Rutter & Co., 256 Broadway, New York.

Schatz Mfg. Co., Chappaqua, N. Y.

Scovill Mfg. Co., Waterbury, Ct.

Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

Seymour Mfg. Co., Seymour, Ct.

Geo. A. Smith Co., Worcester, Mass.

Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

Judson L. Thomson Mfg. Co., Waltham, Mass.

Tudor Boiler Mfg. Co., Cincinnati, O.

W. & S. Mfg. Co., Worcester, Mass.

Worcester Pressed Steel Co., Worcester, Mass.

Worcester Stamping Co., Worcester, Mass.

**Metal Wainscot—**

(See Ceiling and Siding.)

**Metal Wheel Machinery—**

(See Wheel Machinery, Metal.)

**Metal Work, Milled or Turned, to Order—**

Blake & Johnson Co., Waterbury, Ct.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Clark Novelty Co., Rochester, N. Y.

Gem Mfg. Co., Pittsburgh, Pa.

Globe Machine & Stamping Co., Cleveland, O.

E. Konigslow Stamping & Tool Works, Cleveland, O.

Reed & Prince Mfg. Co., Worcester, Mass.

Arthur T. Rutter & Co., 256 Broadway, New York.

Seymour Mfg. Co., Seymour, Ct.

Sparks-Withington Co., Ltd., Jackson, Mich.

**Metal Work, Sheet, Spun, Drawn or Stamped, to Order—**

Adell Bros. Mfg. Co., Orange, Mass.

American Tube & Stamping Co., Bridgeport, Ct.

Avery Stamping Co., Cleveland, O.

Bettcher Mfg. Co., Cleveland, O.

Bossert Electric Construction Co., Utica, N. Y.

Boston Pressed Metal Co., Worcester, Mass.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

A. N. Clark & Son, Plainville, Ct.

W. J. Clark Co., Salem, O.

Consumers Cooler Co., 35th and Butler Sts., Chicago, Ill.

H. C. Cook, Ansonia, Ct.

G. Drouve Co., Bridgeport, Ct.

Erie Stamping Co., Erie, Pa.

Gem Mfg. Co., Pittsburgh, Pa.

Globe Machine & Stamping Co., Cleveland, O.

Helwig Mfg. Co., St. Paul, Minn.

Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

Harvey Hubbell, Inc., Bridgeport, Ct.

Ideal Switch Co., Plainville, Ct.

Ireland & Matthews Mfg. Co., Detroit, Mich.

R. C. Jenkinson & Co., Newark, N. J.

John R. Keim Mills Co., Inc., Buffalo, N. Y.

Otto Konigslow Mfg. Co., Cleveland, O.

Matthews Mfg. Co., Worcester, Mass.

Metal Specialties Mfg. Co., Chicago, Ill.  
John L. Parker Co., Worcester, Mass.  
Arthur T. Rutter & Co., 256 Broadway,  
New York.

Schatz Mfg. Co., Chappaqua, N. Y.  
J. H. Sessions & Son, Bristol, Ct.  
Seymour Mfg. Co., Seymour, Ct.  
Geo. A. Smith Co., Worcester, Mass.  
Sparks-Withington Co., Jackson, Mich.  
W. & S. Mfg. Co., Worcester, Mass.  
Worcester Pressed Steel Co., Worcester,  
Mass.

Worcester Stamping Co., Worcester, Mass.  
**Metal Workers' Crayons—**  
(See Crayons, Lumber, Marble, Metal  
Workers', &c.)

**Metal, Yellow—**  
Bridgeport Brass Co., 253 B'way, N. Y.  
Seymour Mfg. Co., Seymour, Ct.

**Metallic Eyelets, Shingles—**  
(See Eyelets, Shingles.)

**Metals and Materials, Am-  
munition—**

Scovill Mfg. Co., Waterbury, Ct.  
**Metals and Materials, Clock  
and Watch—**

Scovill Mfg. Co., Waterbury, Ct.  
**Metals, Rare, Free from  
Carbon—**

Goldschmidt Thermit Co., 90 West St.,  
New York.

**Meters, Ampere—**  
(See Ammeters.)

**Meters, Blast—**  
Byram & Co., Inc., Detroit, Mich.  
J. W. Faxon Co., Philadelphia, Pa.

**Meters, Milli-Volt Record-  
ing—**

Bristol Co., Waterbury, Ct.  
**Meters, Shunt Ampere Re-  
cording—**

Bristol Co., Waterbury, Ct.  
**Meters, Volt Recording—**

Bristol Co., Waterbury, Ct.  
General Electric Co., Schenectady, N. Y.  
Westinghouse Electric & Mfg. Co., Pitts-  
burgh, Pa.

Zucker & Levett & Loeb Co., 526-530 West  
25th St., New York.

**Meters, Water—**  
Builders' Iron Foundry, Providence, R. I.

**Meters, Water Current—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Meters, Watt Recording—**  
Bristol Co., Waterbury, Ct.

Fort Wayne Electric Works, Fort Wayne,  
Ind.

General Electric Co., Schenectady, N. Y.  
Westinghouse Electric & Mfg. Co., Pitts-  
burgh, Pa.

**Mica—**  
Merchant & Evans Co., 517 Arch St.,  
Philadelphia, Pa.

**Micrometer Calipers, Hold-  
ers—**  
(See Calipers, Holders.)

**Micrometers—**  
Brown & Sharpe Mfg. Co., Providence,  
Goodell-Pratt Co., Greenfield, Mass.  
J. T. Slocumb Co., Providence, R. I.  
L. S. Starrett Co., Athol, Mass.

**Micrometers, Paper—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

J. T. Slocumb Co., Providence, R. I.  
L. S. Starrett Co., Athol, Mass.

**Milk Can Stock—**  
Sturges & Burn Mfg. Co., Chicago, Ill.

**Milk Cans, Strainers—**  
(See Cans, Strainers.)

**Milkman's Bells—**  
(See Bells, Milkman's.)

**Mill Saws—**  
(See Saws, Mill, Mulay, Crosscut, Drag,  
&c.)

**Mill Supplies and Tools—**  
American Well Works, Aurora, Ill.  
Humphrey Machine Co., Keene, N. H.  
Charles Millar & Son Co., Utica, N. Y.  
Standard Clutch Mfg. Co., Sidney, O.

**Mill Tables—**  
Morgan Construction Co., Worcester, Mass.

**Mill Wire Goods—**  
(See Wire Goods, Mill.)

**Mill Work, Saw—**  
(See Saw Mill Machinery.)

**Mill Yard Steel Lamps—**  
(See Lamps, Steel Mill Yard, &c.)

**Milled, Turned or Stamped  
Metal Work, to Order—**  
(See Metal Work, Milled, Turned or  
Stamped, to Order.)

**Millers, Key Seat—**  
(See Key Way Machines.)

**Milling and Drilling Ma-  
chines, Butt—**

F. B. Shuster Co., New Haven, Ct.

**Milling Machine Attach-  
ments—**

Becker Milling Machine Co., Hyde Park,  
Mass.

Cincinnati Milling Machine Co., Cincin-  
nati, O.

R. M. Clough, Tolland, Ct.

Fox Machine Co., Grand Rapids, Mich.  
Garvin Machine Co., Spring & Varick Sts.,  
New York.

Hendey Machine Co., Torrington, Ct.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Pratt & Whitney Co., Hartford, Ct.  
H. B. Underwood & Co., 1025 Hamilton  
St., Philadelphia, Pa.

**Milling Machines—**  
Becker Milling Machine Co., Hyde Park,  
Mass.

Brown & Sharpe Mfg. Co., Providence,  
R. I.

Chicago Machine Tool Co., Chicago, Ill.  
Cincinnati Milling Machine Co., Cincin-  
nati, O.

Asa S. Cook Co., Hartford, Ct.

Espen Lucas Machine Works, Broad and  
Noble Sts., Philadelphia, Pa.

Foots Bros. Gear & Machine Co., 23-30 S.  
Clinton St., Chicago, Ill.

Fox Machine Co., Grand Rapids, Mich.  
Garvin Machine Co., Spring & Varick Sts.,  
New York.

Hendey Machine Co., Torrington, Ct.

Ingersoll Milling Machine Co., Rockford,  
Ill.

W. B. Knight Machinery Co., St. Louis,  
R. K. Le Blond Machine Tool Co., Cin-  
cinnati, O.

Newton Machine Tool Works, 23d and  
Vine Sts., Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway, N. Y.

Pratt & Whitney Co., Hartford, Ct.

Schuchardt & Schutte, 90 West St., N. Y.

Taylor Machinery Co., Boston, Mass.

Universal Boring Machine Co., Hudson, Mass.  
 Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**MERCHANTS.**

Raird Machinery Co., Pittsburgh, Pa.  
 W. R. Beatty Machinery & Equipment Co., Pittsburgh, Pa.  
 Brown & Zortman Machinery Co., Pittsburgh, Pa.  
 Hill, Clarke & Co., Boston, Mass.  
 J. J. McCabe, 14 Dey St., New York.  
 McDowell, Stocker & Co., 59 S. Canal St. Chicago, Ill.  
 Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
 Marshall & Hushart Machinery Co., 62-64 S. Canal St., Chicago, Ill.  
 Edgar M. Moore & Co., Pittsburgh, Pa.  
 Motch & Merryweather Machinery Co., Cleveland, O.  
 Prentiss Tool & Supply Co., 115 Liberty St., New York.  
 H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.  
 Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.  
 Vanduyck, Churchill Co., 8 Dey St., N. Y.  
 A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
 Wickes Bros., Saginaw, Mich.  
 C. C. Wormer Machinery Co., Detroit, Mich.

**Milling Machines. Bench and Hand—**

Becker Milling Machine Co., Hyde Park, Mass.  
 Chicago Machine Tool Co., Chicago, Ill.  
 Fox Machine Co., Grand Rapids, Mich.  
 Garvin Machine Co., Spring & Varick Sts., New York.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Pratt & Whitney Co., Hartford, Ct.  
 Whitney Mfg. Co., Hartford, Ct.

**Milling Machines. Double End—**

Becker Milling Machine Co., Hyde Park, Mass.  
 Garvin Machine Co., Spring & Varick Sts., New York.  
 Hendey Machine Co., Torrington, Ct.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Newton Machine Tool Works, 23d & Vine Sts., Philadelphia, Pa.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Pratt & Whitney Co., Hartford, Ct.  
 F. E. Reed Co., Worcester, Mass.  
 F. B. Shuster Co., New Haven, Ct.

**Milling Machines. High Speed—**

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Hendey Machine Co., Torrington, Ct.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Milling Machines. Keyseat—**

Becker Milling Machine Co., Hyde Park, Mass.  
 John T. Burr & Sons, Brooklyn, N. Y.  
 Ingersoll Milling Machine Co., Rockford, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Newton Machine Tool Works, Inc., 23d and Vine Sts., Philadelphia, Pa.  
 Niles-Bement-Pond Co., 111 Broadway, New York.

Whitney Mfg. Co., Hartford, Ct.

**Milling Machines. Nut and Bolt Head—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 National-Acme Mfg. Co., Cleveland, O.  
 Niles-Bement-Pond Co., 111 Broadway, New York.

**Milling Machines. Oscillating—**

Hendey Machine Co., Torrington, Ct.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Milling Machines. Planer Type—**

Becker Milling Machine Co., Hyde Park, Mass.  
 Ingersoll Milling Machine Co., Rockford, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Milling Machines. Portable—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.

H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Milling Machines. Rack Cutting—**

Brown & Sharpe Mfg. Co., Providence, R. I.

Hendey Machine Co., Torrington, Ct.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Milling Machines. Test Piece—**

Espen-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.  
 Ingersoll Milling Machine Co., Rockford, Ill.

Newton Machine Tool Works, 23d & Vine Sts., Philadelphia, Pa.

**Milling Machines. Thread—**

Pratt & Whitney Co., Hartford, Ct.

**Milling Machines. Universal—**

Becker Milling Machine Co., Hyde Park, Mass.  
 Brown & Sharpe Mfg. Co., Providence, R. I.

Cincinnati Milling Machine Co., Cincinnati, O.

Foot Bros. Gear & Machine Co., 24-30 S. Clinton St., Chicago, Ill.

Garvin Machine Co., Spring & Varick Sts., New York.  
 Hendey Machine Co., Torrington, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

**Milling Machines. Vertical—**

Becker Milling Machine Co., Hyde Park, Mass.  
 Brown & Sharpe Mfg. Co., Providence, R. I.

Cincinnati Milling Machine Co., Cincinnati, O.

R. M. Clough, Tolland, Ct.

Garvin Machine Co., Spring & Varick Sts., New York.

Hendey Machine Co., Torrington, Ct.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Hilles & Jones Co., Wilmington, Del.

Ingersoll Milling Machine Co., Rockford, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Newton Machine Tool Works, 23d & Vine Sts., Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

**Milling Tools, File—**  
National File & Tool Co., The Bourse, Philadelphia, Pa.

**Mills, Adjustable Hollow—**  
Cleveland Twist Drill Co., Cleveland, O.

Geometric Tool Co., New Haven, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Standard Tool Co., Cleveland, O.

Wells Bros. Co., Greenfield, Mass.

**Mills, Blooming—**  
(See Blooming Mills.)

**Mills, Bone and Shell—**  
Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

Humphrey & Sons, Joliet, Ill.

**Mills, Boring and Turning—**  
Baush Machine Tool Co., Brightwood, Mass.

H. Bickford & Co., Lakeport, N. H.

Bullard Mch. Tool Co., Bridgeport, Ct.

Colburn Machine Tool Co., Franklin, Pa.

Espan-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.

E. Harrington, Son & Co. (Inc.), Philadelphia, Pa.

Lucas Machine Tool Co., Cleveland, O.

New Haven Mfg. Co., New Haven, Ct.

Niles-Bement-Pond Co., 111 Broadway, New York.

Rockford Drilling Machine Co., Rockford, Ill.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.

Brown & Zortman Machinery Co., Pittsburgh, Pa.

Hill, Clarke & Co., Boston, Mass.

McDowell, Stocker & Co., 59 S. Canal St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Marshall & Huchart Machinery Co., 62-64 S. Canal St., Chicago, Ill.

Motch & Merryweather Machinery Co., Cleveland, O.

Prentiss Tool & Supply Co., 115 Liberty St., New York.

Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.

Vandyck, Churchill Co., 8 Dey St., N. Y.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wicks Bros., Saginaw, Mich.

**Mills, Boring and Turning Attachments—**  
H. Bickford & Co., Lakeport, N. H.

Bullard Machine Tool Co., Bridgeport, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Mills, Boring and Turning, Vertical—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Mills, Car Wheel Boring—**  
Colburn Machine Tool Co., Franklin, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

**Mills, Cider—**  
R. W. Whitehurst Co., Norfolk, Va.

**Mills, Cinder—**  
Pyram & Co., Inc., Detroit, Mich.

Keystone Farm Machine Co., York, Pa.

Boyerford Foundry & Machine Co., Boyerford, Pa.

**Mills, Clay Grinding—**  
Thomas Prosser & Son, 26 Platt St., N.Y.

**Mills, Coffee, Spice, &c.—**  
Arcade Mfg. Co., Freeport, Ill.

John Chatillon & Sons, 85 Cliff St., N. Y.

Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

Landers, Fray & Clark, New Britain, Ct.

Lane Bros. Co., Poughkeepsie, N. Y.

Charles Parker Co., Meriden, Ct.

Leck, Stow & Wilcox Co., 27 Murray St., New York.

Thomas Prosser & Son, 26 Platt St., N.Y.

R. W. Whitehurst Co., Norfolk, Va.

Wrightsville Hardware Co., Wrightsville, Pa.

**Mills, Continuous Billet, Rod, Hoop, Cotton Tie and Merchant Bar—**  
Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester, Mass.

**Mills, Corn and Feed—**  
Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

S. Freeman & Sons Mfg. Co., Racine, Wis.

Keystone Farm Machine Co., York, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

R. W. Whitehurst Co., Norfolk, Va.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

Wrightsville Hardware Co., Wrightsville, Pa.

**Mills, Cotten—**  
(See Mills, End.)

**Mills, Drug—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

Landers, Fray & Clark, New Britain, Ct.

Lane Bros. Co., Poughkeepsie, N. Y.

Charles Parker Co., Meriden, Ct.

**Mills, End—**  
Cleveland Twist Drill Co., Cleveland, O.

Morse Twist Drill & Machine Co., New Bedford, Mass.

National Tool Co., Cleveland, O.

Fratt & Whitney Co., Hartford, Ct.

Standard Tool Co., Cleveland, O.

**Mills, Fly Wheel Boring—**  
Colburn Machine Tool Co., Franklin, Pa.

- Mills, For Rolling Tin Foil—**  
Blake & Johnson Co., Waterbury, Ct.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.
- Mills, Hollow—**  
Cleveland Twist Drill Co., Cleveland, O.  
National Tool Co., Cleveland, O.
- Mills, Lath and Stave—**  
Wickes Bros., Saginaw, Mich.
- Mills, Linseed Oil—**  
Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.
- Mills, Paint—**  
Poole Engineering & Machine Co., Baltimore, Md.
- Mills, Pug—**  
(See Pug Mills.)
- Mills, Rod Tapering—**  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.
- Mills, Shell End—**  
(See Mills, End.)
- Mills, Tube—**  
Standard Engineering Co., Ellwood City, Pa.  
Wellman-Seaver-Morgan Co., Cleveland, O.
- Mills, Vertical Turning and Boring—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
H. Bickford & Co., Lakeport, N. H.  
Bullard Machine Tool Co., Bridgeport, Ct.  
Colburn Machine Tool Co., Franklin, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.
- Mills, Wet and Dry Tube—**  
Byram & Co., Inc., Detroit, Mich.  
Thomas Prosser & Son, 26 Platt St., N. Y.
- Mills, Wheel Rolling—**  
Bethlehem Steel Co., So. Bethlehem, Pa.
- Mills, Wind—**  
W. E. Caldwell Co., Louisville, Ky.  
S. Freeman & Sons Mfg. Co., Racine, Wis.
- Mast, Focs & Co., Springfield, O.**
- Winship Mfg. Co., Racine, Wis.**
- Mills, Wire Flattening—**  
Blake & Johnson Co., Waterbury, Ct.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.
- Mills, with Inserted Teeth—**  
Morse Twist Drill & Machine Co., New Bedford, Mass.
- Pratt & Whitney Co., Hartford, Ct.**
- Millwrights—**  
American Tool & Machine Co., Boston.  
Humphrey Machine Co., Keene, N. H.
- Mining Knives—**  
(See Knives, Mining.)
- Mine Car Hitchings—**  
(See Couplings, Mine Car.)
- Mine Supplies—**  
Broderick & Bascom Rope Co., St. Louis.  
Chrome Steel Works, Chrome, N. J.  
Jeffrey Mfg. Co., Columbus, O.  
A. Leschen & Sons Rope Co., St. Louis.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
Ernst Wiener Co., Church and Fulton Sts., New York.
- Miners' Lamps—**  
(See Lamps, Miners'.)
- Mining Machinery—**  
Badger State Machine Co., Janesville, Wis.
- Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.**
- Browning Engineering Co., Cleveland, O.**
- Charter Gas Engine Co., Sterling, Ill.**
- Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.**
- Farrel Foundry & Mach. Co., Ansonia, Ct.**
- Fawcus Machine Co., Pittsburgh, Pa.**
- Ingersoll-Rand Co., 11 Broadway, New York.**
- Interstate Engineering Co., Bedford, O.**
- Jeffrey Mfg. Co., Columbus, O.**
- Arthur Koppel Co., Pittsburgh, Pa.**
- Lidgerwood Mfg. Co., 96 Liberty St., N. Y.**
- John H. McGowan Co., Cincinnati, O.**
- Thomas Prosser & Son, 26 Platt St., N. Y.**
- Robins Conveying Belt Co., Park Row Bldg., New York.**
- Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.**
- Wellman-Seaver-Morgan Co., Cleveland, O.**
- Mirrors, Bath Room—**  
Ireland & Matthews Mfg. Co., Detroit, Mich.
- Miscellaneous Rules—**  
(See Measures, Board, Log and Wood.)
- Miscellaneous Wire Nails and Brads—**  
(See Tacks, Brads, Finishing Nails, &c.)
- Miter Boxes, Rods—**  
(See Boxes, Rods.)
- Miter Planers—**  
(See Planers, Miter.)
- Miter Squares—**  
(See Squares, Try.)
- Miters, Eave Trough—**  
Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.
- Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.**
- Mixers, Concrete—**  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.  
Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.
- Interstate Engineering Co., Bedford, O.**
- Knickerbocker Co., Jackson, Mich.**
- Wm. S. Nicholls, 253 Broadway, N. Y.**
- Sidney Elevator Mfg. Co., Sidney, O.**
- Mixers, Concrete, Blades for—**  
Taylor Iron & Steel Co., High Bridge, N. J.
- Mixers, Dough—**  
Gem Mfg. Co., Boston, Mass.
- Landers, Frary & Clark, New Britain, Ct.**
- Mixers, Paint—**  
Poole Engineering & Machine Co., Baltimore, Md.
- Mixers, Plastic Slate—**  
F. H. Evans, Brooklyn, N. Y.
- Mixing Machines, Sand—**  
Barbour-Stockwell Co., Cambridgeport, Mass.
- Gould & Eberhardt, Newark, N. J.**
- Link Belt Co., Inc., Philadelphia, Pa.**
- S. Obermayer Co., Cincinnati, O.**
- J. W. Paxson Co., Philadelphia, Pa.**
- Model and Experimental Work—**  
Adell Bros. Mfg. Co., Orange, Mass.
- Adriance Machine Works, Brooklyn, N. Y.**
- Baird Machine Co., Oakville, Ct.**
- Clark Novelty Co., Rochester, N. Y.**

H. C. Cook & Co., Ansonia, Ct.  
 Albert B. Curtis, Worcester, Mass.  
 Eastern Machine & Stamping Co., Providence, R. I.  
 Wm. Gardam & Son, Inc., 221 Fulton St., New York.  
 Globe Machine & Stamping Co., Cleveland, O.  
 Goodwin & Kintz Co., Winsted, Ct.  
 Grant Mfg. & Machine Co., Bridgeport, Ct.  
 W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
 Ideal Switch Co., Plainville, Ct.  
 Kilborn & Bishop Co., New Haven, Ct.  
 W. B. Knight Machinery Co., St. Louis, Mo.  
 E. Konigsow Stamping & Tool Works, Cleveland, O.  
 Otto Konigsow Mfg. Co., Cleveland, O.  
 Joseph Merritt, Hartford, Ct.  
 Frank Mossberg Co., Attleboro, Mass.  
 Pacific Iron Works, Bridgeport, Ct.  
 Pratt & Whitney Co., Hartford, Ct.  
 Richmond Forgings Corporation, Richmond, Va.  
 Richmond Foundry & Mfg. Co., Inc., Richmond, Va.  
 Robinson Tool Works, Waterbury, Ct.  
 Rollman Mfg. Co., Mount Joy, Pa.  
 Schatz Mfg. Co., Chappaqua, N. Y.  
 M. I. Smith, Bristol, Ct.  
 Torrington Mfg. Co., Torrington, Ct.  
 Webster & Perks Tool Co., Springfield, O.  
 L. T. Weiss, Brooklyn, N. Y.  
 York Pattern Works, York, Pa.

**Modillions, Moldings, &c.—**  
 (See Architectural Sheet Metal Work.)

**Molasses Gates—**  
 (See Gates, Oil and Molasses.)

**Molded Rubber Goods—**  
 (See Rubber Goods, Mechanical.)

**Molders' Bellows—**  
 (See Bellows, Blacksmiths', &c.)

**Molders' Tools—**  
 S. Obermayer Co., Cincinnati, O.  
 J. W. Paxson Co., Philadelphia, Pa.

**Molding, Hip—**  
 (See Architectural Sheet Metal Work.)

**Molding Machines, Foundry—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 S. Obermayer Co., Cincinnati, O.  
 Osborn Mfg. Co., Cleveland, O.  
 J. W. Paxson Co., Philadelphia, Pa.  
 Pennsylvania Engineering Works, New Castle, Pa.  
 Power Specialty Co., 111 Broadway, New York.  
 Jas. Reynolds Mfg. Co., New Haven, Ct.  
 Taylor-Wilson Mfg. Co., McKees Rocks, Pa.  
 Webster & Perks Tool Co., Springfield, Mass.  
 Whiting Foundry Equipment Co., Harvey, Ill.

**Molding Machines, Marble—**  
 F. B. Patch Mfg. Co., Rutland, Vt.

**Molding Machines, Wood—**  
 W. F. & John Barnes Co., Rockford, Ill.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Seneca Falls Mfg. Co., Seneca Falls, N. Y.

**Molding Sand—**  
 (See Sand, Molding.)

**Moldings, Brass—**  
 Bridgeport Brass Co., 253 B'way, N. Y.

**Moldings, Crown and Belt—**  
 (See Cornice, &c., Sheet Metal.)

**Molds, For Casting Metals—**  
 Schwerdtle Stamp Co., Bridgeport, Ct.

**Molds, Glass—**  
 Wheeling Mold & Foundry Co., Wheeling, W. Va.

**Molds, Ingot—**  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Reed F. Blair & Co., Pittsburgh, Pa.  
 Hyde Park Foundry & Machine Co., Hyde Park, Pa.

**Molds, Jelly—**  
 Dover Stamping & Mfg. Co., Cambridge, Mass.

Carnegie Steel Co., Pittsburgh, Pa.  
 J. W. Paxson Co., Philadelphia, Pa.  
 Philadelphia Tool & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.  
 Pittsburgh Mfg. Co., Pittsburgh, Pa.  
 Wheeling Mold & Foundry Co., Wheeling, W. Va.

**Molybdenum—**  
 Goldschmidt Thermit Co., 90 West St., New York.  
 Roessler & Hasslacher Chemical Co., 100 William St., New York.

**Money Drawers—**  
 (See Tills, Alarm.)

**Monitor Heads for Lathes—**  
 W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

**Monograms, Automobile—**  
 Crosby Co., Buffalo, N. Y.  
 Schwerdtle Stamp Co., Bridgeport, Ct.

**Monotype Metal—**  
 Theo. Hertz Metal Co., St. Louis, Mo.  
 Pittsburgh White Metal Co., Pittsburgh, Pa.

**Mops, Floor, Dish, &c.—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Bay State Mop Co., Woburn, Mass.  
 Eagle Cooperage Works, Circleville, O.  
 Estes Mills, Fall River, Mass.  
 Reading Hardware Co., Reading, Pa.

**Mortar Hoes, Hoists—**  
 (See Hoes, Hoists.)

**Mortars and Pestles—**  
 Humphrey & Sons, Joliet, Ill.  
 Stuart & Peterson Co., Burlington, N. J.

**Mortising Machines—**  
 W. F. & John Barnes Co., Rockford, Ill.  
 New Britain Machine Co., New Britain, Ct.

Oliver Machinery Co., Grand Rapids, Mich.  
 Seneca Falls Mfg. Co., Seneca Falls, N. Y.

**Mosquito Netting—**  
 (See Netting, Mosquito.)

**Motor Cars—**  
 (See Automobiles.)

**Motor Cycle Parts—**  
 Standard Welding Co., Cleveland, O.  
 Worcester Pressed Steel Co., Worcester, Mass.

**Motor Springs—**  
 (See Springs, Motor.)

**Motor Trucks, Storage Battery—**  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.



**Motors, Compressed Air—**  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
Helwig Mfg. Co., St. Paul, Minn.  
Ingersoll-Rand Co., 11 Broadway, New York  
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Motors, Electric—**  
Browning Engineering Co., Cleveland, O.  
Jas. Clark, Jr., Electric Co., Louisville, Ky.  
Crocker-Wheeler Co., Ampere, N. J.  
Fort Wayne Electric Works, Fort Wayne, Ind.  
General Electric Co., Schenectady, N. Y.  
Holtzer-Cabot Electric Co., Boston, Mass.  
Northern Engineering Works, Detroit, Mich.  
Otis Elevator Co., Railway Exchange, Chicago, Ill.  
Sheffield Car Co., Three Rivers, Mich.  
Stow Mfg. Co., Binghamton, N. Y.  
B. F. Sturtevant Co., Boston, Mass.  
Warner Elevator Mfg. Co., Cincinnati, O.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**MERCHANTS.**  
Charles Behlen, 72 Trinity Pl., New York  
George Bender, 82 Centre St., New York  
McDowell & Co., Allegheny, Pa.  
MacGovern, Archer & Co., 114 Liberty St., New York  
Marshall & Hushart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Pfannmueller Engineering Co., First National Bank Bldg., Chicago, Ill.  
Power Equipment Co., Fisher Bldg., Chicago, Ill.  
L. F. Seyfert's Sons, Inc., 437-441 N. 3d St., Philadelphia, Pa.  
Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.  
Jacob Ullman, Buffalo, N. Y.  
Walsh's Sons & Co., Newark, N. J.  
Wickes Bros., Saginaw, Mich.  
Yearsley & Levene, 305 N. 3d St., Philadelphia, Pa.

**Motors, Electric Drilling—**  
(See Electric Portable Plants, Drilling, Grinding, &c.)

**Motors, Electric Fan—**  
General Electric Co., Schenectady, N. Y.  
Holtzer-Cabot Electric Co., Boston, Mass.  
W. R. Ostrander & Co., 22 Dey St., N. Y.  
B. F. Sturtevant Co., Hyde Park, Mass.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Motors, Electric, Rolling Mill—**  
(See Motors, Electric.)

**Motors, Electric, Variable Speed—**

Crocker-Wheeler Co., Ampere, N. J.  
Fort Wayne Electric Works, Fort Wayne, Ind.

General Electric Co., Schenectady, N. Y.

**Motors, Elevator—**  
(See Motors, Electric.)

**Motors, Gasoline—**  
(See Engines, Gas and Gasoline.)

**Motors, Steam Turbine—**  
De Laval Steam Turbine Co., Trenton, N. J.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Motors, Water—**  
Humphreys Mfg. Co., Mansfield, O.  
Mesta Machine Co., Pittsburgh, Pa.  
Princess Mfg. Co., Cincinnati, O.  
M. I. Smith, Bristol, Ct.

**Mountings, Automobile and Carriage—**  
Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

**Mountings, Fishing Rod—**  
Clark-Horrocks Co., Utica, N. Y.

**Mouse Traps—**  
(See Traps, Rat and Mouse.)

**Movers, Car—**  
(See Pushers, Car.)

**Movers, Piano—**  
Sycamore Wagon Works, Sycamore, Ill.

**Mowers, Lawn—**  
Blair Mfg. Co., Springfield, Mass.  
Clipper Lawn Mower Co., Dixon, Ill.  
Coldwell Lawn Mower Co., Newburg, N. Y.  
John H. Graham & Co., 113 Chambers St., New York  
Mast, Fosco & Co., Springfield, O.  
Ney Mfg. Co., Canton, O.  
Philadelphia Lawn Mower Co., 3100-3109 Chestnut St., Philadelphia, Pa.  
Reading Hardware Co., Reading, Pa.  
Supplee Hardware Co., Market and 5th Sts., Philadelphia, Pa.  
S. P. Townsend & Co., Orange, N. J.  
Whitman & Barnes Mfg. Co., Chicago  
Worcester Lawn Mower Co., Worcester, Mass.

**Mowers, Motor Lawn—**  
Coldwell Lawn Mower Co., Newburgh, N. Y.

**Muck Bars—**  
(See Bars, Muck.)

**Mud Guards—**  
(See Dashes and Fenders, Carriage, Automobile, &c.)

**Mufflers, Safety Valve—**  
Ashton Valve Co., Boston, Mass.  
Consolidated Safety Valve Co., 85-89 Liberty St., New York  
Lunkenheimer Co., Cincinnati, O.

**Muffles, Annealing—**  
Cyrus Borgner Co., 23d St., above Race, Philadelphia, Pa.  
Morgan Construction Co., Worcester, Mass.

**Muffles, Wire Annealing—**  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Mule and Horse Shoes—**  
(See Shoes, Horse and Mule.)

**Mule Saws—**  
(See Saws, Crosscut, Drag, Mill, &c.)

**Multiplying and Dividing Machines—**  
(See Adding, Computing and Reckoning Machines.)

**Musical String Machinery—**  
Chas. Leffler & Co., Brooklyn, N. Y.

**Muskets, Repeating—**  
(See Rifles, Carbines, &c.)

**Muzzles—**  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.  
**Dufur & Co., Baltimore, Md.**  
Fred. J. Meyers Mfg. Co., Hamilton, O.  
Wire Goods Co., Worcester, Mass.

**Nail Bins, Clippers, Pullers, &c.—**  
(See Bins, Clippers, Pullers, &c.)

**Nail Kegs—**  
(See Kegs, Nail, Bolt, Nut, &c.)

**Nail Machines, Furniture—**  
Blake & Johnson Co., Waterbury, Ct.  
**Nail Machines, Shoe—**  
Kimball Bros. & Sprague, Brockton, Mass.  
Henry Perkins Co., Bridgewater, Mass.

**Nail Machines, Wire—**  
Blake & Johnson Co., Waterbury, Ct.  
Humphrey & Sons, Joliet, Ill.  
Kimball Bros. & Sprague, Brockton, Mass.  
H. J. Miller's Sons, Bridgewater, Mass.  
Henry Perkins Co., Bridgewater, Mass.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
Walton & Macke, Kokomo, Ind.

**Nail Pullers—**  
(See Pullers, Nail.)

**Nail Rattlers—**  
(See Barrels, Tumbling.)

**Nails, Aluminum—**  
John Hassall, Brooklyn, N. Y.  
Milwaukee Tack Co., Milwaukee, Wis.  
**Nails and Studs, Ornamental—**  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Nails and Tacks, Brass—**  
U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.

**Nails and Tacks, Brush—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Globe-Taunton Nail Co., Taunton, Mass.  
Grand Crossing Tack Co., Grand Crossing, Ill.

John Hassall, Brooklyn, N. Y.  
Milwaukee Tack Co., Milwaukee, Wis.  
Ripley & Bartlett, Plymouth, Mass.  
Shelton Co., Shelton, Ct.  
Tower Mfg. Co., Cincinnati, O.  
C. C. & E. P. Townsend Co., New Brighton, Pa.

**Nails and Tacks, Copper—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Blake & Johnson Co., Waterbury, Ct.  
Cobb & Drew, Inc., Plymouth, Mass.  
Globe-Taunton Nail Co., Taunton, Mass.  
Grand Crossing Tack Co., Grand Crossing, Ill.

U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.  
Homer F. Livermore, Boston, Mass.  
Milwaukee Tack Co., Milwaukee, Wis.  
E. Phillips & Sons, South Hanover, Mass.  
Shelton Co., Shelton, Ct.

**Nails and Tacks, Trunk—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Cobb & Drew, Inc., Plymouth, Mass.  
Grand Crossing Tack Co., Grand Crossing, Ill.

Milwaukee Tack Co., Milwaukee, Wis.  
E. Phillips & Sons, South Hanover, Mass.  
Ripley & Bartlett, Plymouth, Mass.  
Shelton Co., Shelton, Ct.

**Nails, Barrel and Hoop—**  
(See Tacks, Coopers.)

**Nails, Basket—**  
(See Tacks, Box, Basket, &c.)

**Nails, Boat—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

**Nails, Boat, Galvanized—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Thomas Laughlin Co., Portland, Me.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Nails, Brass—**  
E. Phillips & Sons, So. Hanover, Mass.

**Nails, Canvas—**  
Milwaukee Tack Co., Milwaukee, Wis.  
Tower Mfg. Co., Cincinnati, O.

**Nails, Cement Coated—**  
Griswold Co., Sterling, Ill.  
J. C. Pearson Co., Boston, Mass.

**Nails, Chair—**  
Grand Crossing Tack Co., Grand Crossing, Ill.

Milwaukee Tack Co., Milwaukee, Wis.  
Tower Mfg. Co., Cincinnati, O.

**Nails, Cigar Box—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Grand Crossing Tack Co., Grand Crossing, Ill.

John Hassall, Brooklyn, N. Y.  
Tower Mfg. Co., Cincinnati, O.  
C. C. & E. P. Townsend Co., New Brighton, Pa.

**Nails, Clout—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Cobb & Drew, Inc., Plymouth, Mass.  
Grand Crossing Tack Co., Grand Crossing, Ill.

U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.

H. J. Miller's Sons, Bridgewater, Mass.  
Milwaukee Tack Co., Milwaukee, Wis.  
E. Phillips & Sons, South Hanover, Mass.  
Ripley & Bartlett, Plymouth, Mass.  
Shelton Co., Shelton, Ct.  
Tower Mfg. Co., Cincinnati, O.

**Nails, Copper Shoe—**  
(See Nails and Tacks, Copper.)

**Nails, Copper Slating—**  
U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.  
Milwaukee Tack Co., Milwaukee, Wis.

**Nails, Copper Wire—**  
(See Nails and Tacks, Copper.)

**Nails, Corrugated—**  
Globe-Taunton Nail Co., Taunton, Mass.  
Ripley & Bartlett, Plymouth, Mass.

**Nails, Countersunk Head—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Globe-Taunton Nail Co., Taunton, Mass.  
Ripley & Bartlett, Plymouth, Mass.  
C. C. & E. P. Townsend Co., New Brighton, Pa.

**Nails, Cut—**  
La Belle Iron Works, Steubenville, O.

**Nails, Fender—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
H. O. Canfield Co., Bridgeport, Ct.

**Nails, Finishing—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Grand Crossing Tack Co., Grand Crossing,  
Ill.  
Youngstown Sheet & Tube Co., Youngs-  
town, O.

**Nails, Galvanized, Cut—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Cleveland Galvanizing Works Co., Cleve-  
land, O.

Keystone Nail Co., Pittsburgh, Pa.  
Thomas Laughlin Co., Portland, Me.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
C. C. & E. P. Townsend Co., New Bright-  
ton, Pa.  
Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

Youngstown Sheet & Tube Co., Youngs-  
town, O.

**Nails, Galvanized, Wire—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Keystone Nail Co., Pittsburgh, Pa.

**Nails, Hide or Tanners—**

H. J. Miller's Sons, Bridgewater, Mass.  
Tower Mfg. Co., Cincinnati, O.

**Nails, Hinge and Wagon—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

**Nails, Hob—**

H. J. Miller's Sons, Bridgewater, Mass.  
Milwaukee Tack Co., Milwaukee, Wis.  
Ripley & Bartlett, Plymouth, Mass.  
Louis Sachs, Newark, N. J.  
Shelton Co., Shelton, Ct.  
Tower Mfg. Co., Cincinnati, O.

**Nails, Horseshoe—**

Capwell Horse Nail Co., Hartford, Ct.  
Fowler Nail Co., Seymour, Ct.  
Standard Horse Nail Co., New Brighton,  
Pa.

Wiebusch & Hilger, Ltd., 106-110 Lafay-  
ette St., New York.

**Nails, Hungarian—**

H. J. Miller's Sons, Bridgewater, Mass.  
Ripley & Bartlett, Plymouth, Mass.  
Shelton Co., Shelton, Ct.  
Tower Mfg. Co., Cincinnati, O.

**Nails, Last—**

Globe-Taunton Nail Co., Taunton, Mass.  
Grand Crossing Tack Co., Grand Crossing,  
Ill.

E. Phillips & Sons, South Hanover, Mass.

**Nails, Picture—**

Globe-Taunton Nail Co., Taunton, Mass.  
Parker Wire Goods Co., Worcester, Mass.  
Turner & Stanton Co., Norwich, Ct.

**Nails, Roofing—**

Youngstown Sheet & Tube Co., Youngs-  
town, O.

**Nails, Saddle and Lining—**

Grand Crossing Tack Co., Grand Crossing,  
Ill.  
Shelton Co., Shelton, Ct.

**Nails, Sheathing and Roof-  
ing—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Grand Crossing Tack Co., Grand Crossing,  
Ill.

Grigswold Co., Sterling, Ill.

Henry J. Miller's Sons, Bridgewater,  
Mass.

E. Phillips & Sons, South Hanover, Mass.  
C. C. & E. P. Townsend Co., New Bright-  
ton, Pa.

**Nails, Sherardized—**

New Castle Forge & Bolt Co., New  
Castle, Pa.

**Nails, Shoe, Brass—**

Milwaukee Tack Co., Milwaukee, Wis.

**Nails, Shoe, Cobblers'.**

**Channel, &c.—**  
Grand Crossing Tack Co., Grand Crossing,  
Ill.

H. J. Miller's Sons, Bridgewater, Mass.

Milwaukee Tack Co., Milwaukee, Wis.

E. Phillips & Sons, South Hanover, Mass.

Ripley & Bartlett, Plymouth, Mass.

Shelton Co., Shelton, Ct.

Tower Mfg. Co., Cincinnati, O.

**Nails, Shoe, Zinc—**

E. Phillips & Sons, So. Hanover, Mass.

**Nails, Tie Dating—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

C. C. & E. P. Townsend Co., New Bright-  
ton, Pa.

**Nails, Tinned—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

C. C. & E. P. Townsend Co., New Bright-  
ton, Pa.

Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

**Nails, Trunk—**

H. J. Miller's Sons, Bridgewater, Mass.

**Nails, Upholsterers—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Parker Wire Goods Co., Worcester, Mass.

Turner & Stanton Co., Norwich, Ct.

Wire Goods Co., Worcester, Mass.

**Nails, Wagon, Hinge, &c.—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Grand Crossing Tack Co., Grand Crossing,  
Ill.

C. C. & E. P. Townsend Co., New Bright-  
ton, Pa.

**Nails, Wire—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Globe-Taunton Nail Co., Taunton, Mass.

Grand Crossing Tack Co., Grand Crossing,  
Ill.

Grigswold Co., Sterling, Ill.

John Hassall, Brooklyn, N. Y.

Keystone Steel & Wire Works, Peoria, Ill.

Morgan Spring Co., Worcester, Mass.

Parker Wire Goods Co., Worcester, Mass.

Phillips Pressed Steel Pulley Works, 4th  
St. & Glenwood Ave., Philadelphia,  
Pa.

Pittsburgh Steel Co., Pittsburgh, Pa.

E. H. Titchener & Co., Binghamton, N. Y.

C. C. & E. P. Townsend Co., New Bright-  
ton, Pa.

Washburn Wire Co., Phillipsdale, R. I.

Wickwire Bros., Cortland, N. Y.

Wire Goods Co., Worcester, Mass.

Youngstown Sheet & Tube Co., Youngs-  
town, O.

**Nails, Wire, Aluminum—**  
John Hassall, Brooklyn, N. Y.

**Nails, Wire, Brass—**  
John Hassall, Brooklyn, N. Y.  
Milwaukee Tack Co., Milwaukee, Wis.

**Nails, Wire, Copper—**  
John Hassall, Brooklyn, N. Y.

**Nails, Wire, German Silver—**  
John Hassall, Brooklyn, N. Y.

**Nails, Zinc, Greenhouse—**  
E. Phillips & Sons, So. Hanover, Mass.

**Name Plates—**  
(See Plates, Name.)

**Napkin Rings—**  
(See Rings, Napkin, Silver Plated.)

**Natural Gas Burners—**  
(See Burners, Natural Gas.)

**Natural Gas Pumps—**  
(See Pumps, Natural Gas.)

**Navy and Army Scales—**  
(See Scales, Army and Navy.)

**Needle Bar Stock—**  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.

**Needle Wire—**  
(See Wire, Needle.)

**Needles, Knitting, Machine—**  
Excelsior Needle Co., Torrington, Ct.

**Needles, Mattress—**  
Schuchardt & Schutte, 90 West St., N. Y.

**Needles, Open or Welded Handle—**  
Hubbard & Co., Pittsburgh, Pa.

**Needles, Sail Makers' Packing, &c.—**  
Schuchardt & Schutte, 90 West St., N. Y.

**W. & J. Tiebout, 118 Chambers St., N. Y.**

**Wiebusch & Hilger, Ltd., 106-110 Lafay-**

**ette St., New York.**

**Needles, Sewing, Machine—**

**Excelsior Needle Co., Torrington, Ct.**

**Needles, Wax Thread—**

**Excelsior Needle Co., Torrington, Ct.**

**Nests, Hens', &c.—**

**Gilbert & Bennett Mfg. Co., 277 Broad-**

**way., New York.**

**Ludlow-Saylor Wire Co., St. Louis, Mo.**

**Nets, Bicycle—**

**Turner & Stanton Co., Norwich, Ct.**

**Nets, Scoop—**

**Thomas Laughlin Co., Portland, Me.**

**W. & J. Tiebout, 118 Chambers St., N. Y.**

**Wilcox, Crittenden & Co., Inc., Middle-**

**town, Ct.**

**Nets, Scoop, Ice—**

**(See Ice Harvesting Tools.)**

**Netting, Minnow—**

**I. E. Palmer Co., Middletown, Ct.**

**Netting, Mosquito—**

**I. E. Palmer Co., Middletown, Ct.**

**Netting, Wire—**

**American Steel & Wire Co., Commercial**

**National Bank Bldg., Chicago, Ill.**

**Buffalo Wire Works Co., Buffalo, N. Y.**

**Clinton Wire Cloth Co., Clinton, Mass.**

**Dufur & Co., Baltimore, Md.**

**Estey Wire Works Co., 59 Fulton St.,**

**New York.**

**Gilbert & Bennett Mfg. Co., 277 Broad-**

**way, New York.**

**Howard & Morse, 45 Fulton St., N. Y.**

**Ludlow-Saylor Wire Co., St. Louis, Mo.**

**Michigan Wire Cloth Co., Detroit, Mich.**

**New Jersey Wire Cloth Co., Trenton, N. J.**

**Philadelphia Steel & Wire Co., 525 Com-**

**merce St., Philadelphia, Pa.**

**W. S. Tyler Co., Cleveland, O.**

**Wickwire Bros., Cortland, N. Y.**

**Wright Wire Co., Worcester, Mass.**

**(See also Fencing, Poultry.)**

**Nickel—**

**American Metal Co., 52 Broadway, N. Y.**

**Hermann Boker & Co., 101-103 Duane St.,**

**New York.**

**Hanson & Van Winkle Co., Newark,**

**N. J.**

**Seymour Mfg. Co., Seymour, Ct.**

**Waite, Randet & Co., Boston, Mass.**

**Nickel Alloys—**

**(See Alloys, Nickel.)**

**Nickel, Electro Plated—**

**(See Plating, Electro, Nickel, &c.)**

**Nickel Plating—**

**(See Plating, Nickel.)**

**Nickeline—**

**Hermann Boker & Co., 101 Duane St., N. Y.**

**Night Latches—**

**(See Latches, Night.)**

**Nippers, Bicycle—**

**Kilborn & Bishop Co., New Haven, Ct.**

**Utica Drop Forge & Tool Co., Utica,**

**N. Y.**

**Nippers, Bolt, Pneumatic—**

**Helwig Mfg. Co., St. Paul, Minn.**

**Nippers, Cutting—**

**Heller Bros. Co., Newark, N. J.**

**Kilborn & Bishop Co., New Haven, Ct.**

**Schuchardt & Schutte, 90 West St., N. Y.**

**Utica Drop Forge & Tool Co., Utica,**

**N. Y.**

**Wiebusch & Hilger, Ltd., 106-110 Lafay-**

**ette St., New York.**

**Nippers, End Cutting—**

**Bridgeport Hardware Mfg. Co., Bridge-**

**port, Ct.**

**Cronk & Carrier Mfg. Co., Elmira, N. Y.**

**Irvington Mfg. Co., Irvington, N. J.**

**Kilborn & Bishop Co., New Haven, Ct.**

**Peck, Stow & Wilcox Co., 27 Murray St.,**

**New York.**

**Louis Sacks, Newark, N. J.**

**Otis A. Smith, Rockfall, Ct.**

**L. S. Starrett Co., Athol, Mass.**

**Utica Drop Forge & Tool Co., Utica,**

**N. Y.**

**Nippers, Hoof Cutting—**

**Peck, Stow & Wilcox Co., 27 Murray St.,**

**New York.**

**Nippers, Stay Bolt—**

**Chicago Pneumatic Tool Co., Fisher**

**Bldg., Chicago, Ill.**

**Nipple Blank Machines, Bi-**

**cycle—**

**Waterbury Farrel Foundry & Machine**

**Co., Waterbury, Ct.**

**Nipple Holders, Wrenches—**

**(See Holders, Wrenches.)**

**Nipple Machines—**

**Merrell Mfg. Co., Toledo, O.**

**Nipple Threading Ma-**

**chines—**

**(See Threading Machines.)**

**Nipples, Bicycle and Auto-**

**mobile—**

**American Steel & Wire Co., Commercial**

**National Bank Bldg., Chicago, Ill.**

**E. J. Manville Machine Co., Waterbury,**

**Ct.**

**Wire Goods Co., Worcester, Mass.**

- Nipples, Pipe—**  
Lunkenheimer Co., Cincinnati, O.
- Nipples, Soldering—**  
Clum & Atkinson, Rochester, N. Y.
- Notary Seals—**  
(See Seals, Notary, &c.)
- Notching Machines. Armature Disc—**  
E. W. Bliss Co., Brooklyn, N. Y.  
Jas. Clark, Jr., Electric Co., Louisville, Ky.  
Consolidated Press & Tool Co., Hastings, Mich.  
Ferracute Machine Co., Bridgeton, N. J.  
Long & Allstatter Co., Hamilton, O.  
Niagara Machine & Tool Works, Buffalo, N. Y.
- Notching Machines, Splice Bar—**  
Long & Allstatter Co., Hamilton, O.
- Novelties, Advertising—**  
(See Advertising Novelties.)
- Nozzle Piezometer Gauges—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Nozzles, Blast—**  
Eynon-Evans Mfg. Co., 1507 Clearfield St., Philadelphia, Pa.
- Nozzles, Boiler and Saddle Flange—**  
American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.
- Nozzles, Hose—**  
W. J. Clark Co., Salem, O.  
Landers, Frary & Clark, New Britain, Ct.  
F. E. Myers & Bro., Ashland, O.
- Nozzles, Hydraulic Mining—**  
American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.
- Nozzles, Ladle—**  
McCullough-Dalzell Crucible Co., Pittsburgh, Pa.  
B. B. Seidel, Inc., 1334 Callowhill St., Philadelphia, Pa.
- Nozzles, Oil—**  
American Tube & Stamping Co., Bridgeport, Ct.  
Gem Mfg. Co., Pittsburgh, Pa.
- Nozzles, Sand Blast—**  
Lunkenheimer Co., Cincinnati, O.
- Nozzles, Spraying—**  
Deming Co., Salem, O.
- Numbering Machines, Automatic—**  
A. G. Butler, 284-286 Pearl St., N. Y.
- Numbers, House—**  
(See Letters and Figures, House.)
- Nut and Bolt Head Milling Machines—**  
Pawtucket Mfg. Co., Pawtucket, R. I.
- Nut and Bolt Machinery—**  
(See Bolt and Nut Machinery.)
- Nut Covers—**  
(See Covers, Nut.)
- Nut Crackers, Picks—**  
(See Crackers, Picks.)
- Nut Keys—**  
(See Keys, Nail, Bolt, Nut, &c.)
- Nut Machines—**  
(See Forging Machines, Pointers and Presses, Nut.)
- Nut Tapping Machines—**  
(See Burring Machines, Facing Machines, Tapping Machines.)
- Nutmeg Grates—**  
(See Grates, Nutmeg.)
- Nutmeg Razors—**  
(See Razors, Nutmeg.)
- Nuts, Automobile—**  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- Nuts, Blank—**  
(See Nuts, Square and Hexagon.)
- Nuts, Brass—**  
Detroit Screw Works, Detroit, Mich.  
Hanson Bros., Plainville, Ct.  
Hartford Machine Screw Co., Hartford, Ct.  
National-Acme Mfg. Co., Cleveland, O.  
New Haven Machine Screw Co., New Haven, Ct.  
Pawtucket Mfg. Co., Pawtucket, R. I.
- Nuts, Bridge Pin—**  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- Nuts, Cap—**  
National Bolt & Nut Co., Pittsburgh, Pa.
- Nuts, Cast—**  
Atlas Bolt & Screw Co., Cleveland, O.  
Blake & Johnson Co., Waterbury, Ct.  
Detroit Screw Works, Detroit, Mich.  
Hartford Machine Screw Co., Hartford, Ct.  
National-Acme Mfg. Co., Cleveland, O.  
New Haven Machine Screw Co., New Haven, Ct.
- Nuts, Castelled—**  
Steward & Romaine Mfg. Co., Philadelphia, Pa.
- Nuts, Castellated—**  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- Nuts, Check—**  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.
- Nuts, Cold Punched—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.
- Nuts, Coupling—**  
Detroit Screw Works, Detroit, Mich.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Graham Nut Co., Pittsburgh, Pa.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.
- Nuts, Eye—**  
Milton Mfg. Co., Milton, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
Pawtucket Mfg. Co., Pawtucket, R. I.
- Nuts, Finished Case Hardened—**  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- Nuts, Eye—**  
Billings & Spencer Co., Hartford, Ct.
- Nuts, Finished Case Hardened—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.  
Detroit Screw Works, Detroit, Mich.  
Graham Nut Co., Pittsburgh, Pa.  
Hartford Machine Screw Co., Hartford, Ct.
- Nuts, Eye—**  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

National-Acme Mfg. Co., Cleveland, O.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Haven Machine Screw Co., New Haven, Ct.

Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**Nuts, Hot Forged—**  
(See Nuts, Large Forged.)

**Nuts, Hot Pressed—**  
Allegheny Forging Co., Pittsburgh, Pa.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Graham Nut Co., Pittsburgh, Pa.  
Milton Mfg. Co., Milton, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Shelton Co., Shelton, Ct.

**Nuts, Hot Punched—**  
Detroit Screw Works, Detroit, Mich.

**Nuts, Jam—**  
(See Nuts, Check.)

**Nuts, Joint—**  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

National Bolt & Nut Co., Pittsburgh, Pa.

**Nuts, Knurled—**  
Wallace Barnes Co., Bristol, Ct.

Blake & Johnson Co., Waterbury, Ct.  
Detroit Screw Works, Detroit, Mich.  
Hartford Machine Screw Co., Hartford, Ct.  
National-Acme Mfg. Co., Cleveland, O.  
New Haven Machine Screw Co., New Haven, Ct.

Pratt & Whitney Co., Hartford, Ct.

**Nuts, Large, Forged—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Fort Pitt Forge Co., Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

**Nuts, Lock—**  
American Lock Nut Co., Oregon, Ill.  
Detroit Screw Works, Detroit, Mich.  
Hartford Machine Screw Co., Hartford, Ct.

National Tube Co., Pittsburgh, Pa.

**Nuts, Machine Forged—**  
Pawtucket Mfg. Co., Pawtucket, R. I.  
Rhode Island Tool Co., Providence, R. I.

**Nuts, Machine Screw—**  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**Nuts, Pipe, Sleeve—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.

**Nuts, Planer—**  
Detroit Screw Works, Detroit, Mich.  
National-Acme Mfg. Co., Cleveland, O.

**Nuts, Semi-Finished—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.

Detroit Screw Works, Detroit, Mich.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Graham Nut Co., Pittsburgh, Pa.  
Hartford Machine Screw Co., Hartford, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

National Bolt & Nut Co., Pittsburgh, Pa.

New Haven Machine Screw Co., New Haven, Ct.

Pawtucket Mfg. Co., Pawtucket, R. I.  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**Nuts, Semi-Finished and Case Hardened—**  
Chicago Screw Co., 2 Canal St., Chicago, Ill.

**Nuts, Sleeve—**  
National Bolt & Nut Co., Pittsburgh, Pa.

**Nuts, Special—**  
Wallace Barnes Co., Bristol, Ct.  
Hanson Bros., Plainville, Ct.

National-Acme Mfg. Co., Cleveland, O.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

W. & S. Mfg. Co., Worcester, Mass.  
Worcester Pressed Steel Co., Worcester, Mass.

**Nuts, Square and Hexagon—**  
American Bridge Co. of New York, 30 Church St., New York.

American Iron & Steel Mfg. Co., Lebanon, Pa.

Atlas Bolt & Screw Co., Cleveland, O.  
Wallace Barnes Co., Bristol, Ct.

Clark Bros. Bolt Co., Milldale, Ct.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Sam'l Hall's Sons, 229-233 West 10th St., New York.

Hartford Machine Screw Co., Hartford, Ct.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.  
Milton Mfg. Co., Milton, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.  
New Castle Forge & Bolt Co., New Castle, Pa.

New Haven Machine Screw Co., New Haven, Ct.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Pawtucket Mfg. Co., Pawtucket, R. I.

Phosphor Bronze Smelting Co., Ltd., 220 Washington Ave., Philadelphia.

Pittsburgh Mfg. Co., Pittsburgh, Pa.  
Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.

Reed & Prince Mfg. Co., Worcester, Mass.

Republic Iron & Steel Co., Pittsburgh, Pa.  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Upon Nut Co., Cleveland, O.  
W. & S. Mfg. Co., Worcester, Mass.

**Nuts, Stirrup—**  
National Bolt & Nut Co., Pittsburgh, Pa.

**Nuts, Tapped—**  
(See Nuts, Square and Hexagon.)

**Nuts, Thumb—**  
Atlas Bolt & Screw Co., Cleveland, O.

Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.  
Chicago Screw Co., 2 No. Canal St., Chicago, Ill.

Clark Bros. Bolt Co., Milldale, Ct.

Detroit Screw Works, Detroit, Mich.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Hanson Bros., Plainville, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Keystone Drop Forge Works, Chester, Pa.

Franklin S. Miles Co., 205 Quarry St., Philadelphia, Pa.  
 Philadelphia Machine Screw Works, 624-626 Race St., Philadelphia, Pa.  
 Republic Iron & Steel Co., Pittsburgh, Pa.  
 Whitman & Barnes Mfg. Co., Chicago, Ill.

J. H. Williams & Co., Brooklyn, N. Y.  
 Wrightsville Hardware Co., Wrightsville, Pa.

**Nuts, Wagon Clip**—  
 National Bolt & Nut Co., Pittsburgh, Pa.  
**Nuts, Wing**—(See Nuts, Thumb.)

**Oakum**—  
 Brodick & Bascom Rope Co., St. Louis.  
 A. Leachen & Sons Rope Co., St. Louis.  
 New York Cordage Co., 83-85 Wall St., New York.

**Odometers**—  
 Keuffel & Esser Co., 127 Fulton St., N. Y.  
 Veeder Mfg. Co., Hartford, Ct.

**Office Wire**—(See Wires, Electrical.)

**Oil and Molasses Gates**—  
 (See Gates, Oil and Molasses.)

**Oil Cans, &c.**—(See Cans, &c.)

**Oil Cloth, Paper Hangers' &c., Knives**—  
 (See Knives, Paper Hangers', Oil Cloth, &c.)

**Oil, Core**—  
 S. Obermayer Co., Cincinnati, O.  
 J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.

**Oil, Cylinder Lubricating**—  
 Power Specialty Co., 111 Broadway, N. Y.

**Oil Drills**—  
 (See Drills, Oil.)

**Oil Equipment, Fuel**—  
 (See Fuel Oil Equipment.)

**Oil, Floor**—  
 Carpenter-Morton Co., Boston, Mass.

**Oil, Fly**—  
 Carpenter-Morton Co., Boston, Mass.

**Oil, Gun**—  
 J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

**Oil, Lubricating**—  
 Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

Dearborn Drug & Chemical Works, Postal Telegraph Bldg., Chicago, Ill.

John H. Graham & Co., 113 Chambers St., New York.

**Oil, Oil Stone**—  
 Pike Mfg. Co., Pike, N. H.

**Oil Stone Wheels**—  
 (See Wheels, Oil Stone.)

**Oil Wells, Machinery for Pumping**—  
 (See Pumping Oil Wells, Machinery for.)

**Oil Well Supplies and Tools**—  
 (See Well Supplies and Tools.)

**Oil Nozzles**—  
 (See Nozzles, Oil.)

**Oilers, Automatic**—  
 Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

**Oilers, Automobile**—  
 Maple City Mfg. Co., Monmouth, Ill.

**Oilers, Bicycle and Phonograph**—  
 Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

Scovill Mfg. Co., Waterbury, Ct.

**Oilers, Car Pit**—  
 Gem Mfg. Co., Pittsburgh, Pa.

**Oilers, Engine**—  
 American Tube & Stamping Co., Bridgeport, Ct.

R. E. Bloomer, Keithsburg, Ill.

Gem Mfg. Co., Pittsburgh, Pa.

Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

Johnson Mfg. Co., Urbana, O.

Maple City Mfg. Co., Monmouth, Ill.

Wm. Powell Co., Cincinnati, O.

Western Tool & Mfg. Co., Springfield, O.

**Oilers, Felloe**—  
 Heath Foundry & Mfg. Co., Plymouth, O.

**Oilers, Locomotive Valve**—  
 Maple City Mfg. Co., Monmouth, Ill.

**Oilers, Loose Pulley**—  
 Gem Mfg. Co., Pittsburgh, Pa.

Lunkenheimer Co., Cincinnati, O.

Wm. Powell Co., Cincinnati, O.

**Oilers, Malleable Iron**—  
 Hammer & Co., Branford, Ct.

**Oilers, Mowing and Sewing Machine**—  
 (See Oilers, Spring.)

**Oilers, Pump**—  
 R. E. Bloomer, Keithsburg, Ill.

Dover Stamping & Mfg. Co., Cambridge, Mass.

Maple City Mfg. Co., Monmouth, Ill.

**Oilers, Shafting**—  
 American Tube & Stamping Co., Bridgeport, Ct.

Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

R. E. Bloomer, Keithsburg, Ill.

Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

Lunkenheimer Co., Cincinnati, O.

Maple City Mfg. Co., Monmouth, Ill.

Ohio Brass Co., Mansfield, O.

Wm. Powell Co., Cincinnati, O.

Scovill Mfg. Co., Waterbury, Ct.

**Oilers, Spring**—  
 American Tube & Stamping Co., Bridgeport, Ct.

Bridgeport Brass Co., 253 B'way, N. Y.

Dover Stamping & Mfg. Co., Cambridge, Mass.

Gem Mfg. Co., Pittsburgh, Pa.

John H. Graham & Co., 113 Chambers St., New York.

Hammer & Co., Branford, Ct.

Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

Maple City Mfg. Co., Monmouth, Ill.

Scovill Mfg. Co., Waterbury, Ct.

Whitman & Barnes Mfg. Co., Chicago, Ill.

**Oilers, Valve**—  
 R. E. Bloomer, Keithsburg, Ill.

**Oilers, Valveless Force Feed**—  
 J. L. Osgood, Buffalo, N. Y.

**Oiling Systems**—  
 Burt Mfg. Co., Akron, O.

**Old Material**—  
 (See Material, Old.)

**One Man Saws**—  
 (See Saws, Mill, Muley, Crosscut, &c.)

**Open Links**—  
 (See Links, Repair and Lap.)

**Openers, Bottle—**

Eric Specialty Co., Erie, Pa.

**Openers, Bottle, Crown Sealed—**

Arcade Mfg. Co., Freeport, Ill.

**Openers, Box and Crate—**

Arcade Mfg. Co., Freeport, Ill.

C. E. Bonner Mfg. Co., Chrisman, Ill.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Herculever Co., 106-110 Lafayette St., New York.

Kilborn & Bishop Co., New Haven, Ct.

**Openers, Can—**

American Cutlery Co., Chicago, Ill.

Arcade Mfg. Co., Freeport, Ill.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Clauss Shear Co., Fremont, O.

Columbia Grey Iron Co., Columbia, Pa.

Benjamin P. Forbes, Cleveland, O.

Goodell Co., Antrim, N. H.

John H. Graham & Co., 113 Chambers St., New York.

Landers, Frary & Clark, New Britain, Ct.

Lasher Mfg. Co., Davenport, Ia.

Parker Wire Goods Co., Worcester, Mass.

**Openers, Clear Box—**

American Cutlery Co., Chicago, Ill.

Arcade Mfg. Co., Freeport, Ill.

Dame, Stoddard & Co., Boston, Mass.

John H. Graham & Co., 113 Chambers St., New York.

Kilborn & Bishop Co., New Haven, Ct.

**Openers, Egg—**

(See Egg Openers.)

**Openers, Fruit Jar—**

(See Wrenches, Fruit Jar.)

**Openers, Letter—**

American Cutlery Co., Chicago, Ill.

**Openers, Sash and Window—**

G. Drouve Co., Bridgeport, Ct.

David Lupton's Sons Co., Westmoreland and Janney Sts., Philadelphia, Pa.

**Openers, Skylight Window—**

G. Drouve Co., Bridgeport, Ct.

David Lupton's Sons Co., Westmoreland and Janney Sts., Philadelphia, Pa.

**Order Sheet Binders and Holders—**

(See Binders and Holders, Order Sheet.)

**Ore, Chrome—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

Reed F. Blair & Co., Pittsburgh, Pa.

C. W. Leavitt & Co., 30 Church St., New York.

Frank Samuel, Harrison Bldg., Philadelphia, Pa.

**Ore Crushers, Washer Screws—**

(See Crushers, Screws.)

**Ore Handling Machinery—**

Broderick & Bascom Rope Co., St. Louis.

Browning Engineering Co., Cleveland, O.

Brown Hoisting Machinery Co., Cleveland, O.

Interstate Engineering Co., Bedford, O.

A. Leachen & Sons Rope Co., St. Louis.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Ore, Iron—**

La Belle Iron Works, Steubenville, O.

C. W. Leavitt & Co., 30 Church St., New York.

Oglebay, Norton & Co., Cleveland, O.

Pilling & Crane, Girard Bldg., Philadelphia, Pa.

Youngtown Sheet & Tube Co., Youngtown, O.

**MERCHANTS.**

Jerome Keeley & Co., 421 Chestnut St., Philadelphia, Pa.

Ernest Law & Co., 15th and Market Sts., Philadelphia, Pa.

J. Tammill Lea & Co., 19 So. 12th St., Philadelphia, Pa.

J. J. Mohr, Bullitt Bldg., Philadelphia.

Frank Samuel, 15th and Market Sts., Philadelphia, Pa.

W. P. Snyder & Co., Pittsburgh, Pa.

Tod-Stambaugh Co., Cleveland, O.

**Ore, Lead and Zinc—**

American Metal Co., 52 Broadway, N. Y.

C. W. Leavitt & Co., 30 Church St., New York.

**Ore, Manganese—**

Frank Samuel, Harrison Bldg., Philadelphia, Pa.

**Ore Shovels—**

(See Shovels, Ore.)

**Ores and Maties, Copper—**

American Metal Co., 52 Broadway, N. Y.

**Organ Hardware—**

(See Piano and Organ Hardware.)

**Organ Tools—**

(See Tools, Piano and Organ.)

**Ornamental Clocks—**

(See Clocks, Ornamental.)

**Ornamental Iron, Brass and Bronze Work—**

(See Iron, Brass and Bronze, Ornamental.)

**Ornamental Sheet Metal Work—**

(See Metal Specialties, Ornamental Sheet.)

**Ornaments, Stove—**

Ireland & Matthews Mfg Co., Detroit, Mich.

Mathews Mfg. Co., Worcester, Mass.

**Ovens, Annealing—**

John W. Seaver, Cleveland, O.

Vollkommer & Co., Pittsburgh, Pa.

Whiting Foundry Equipment Co., Harvey, Ill.

**Ovens, Baking, Electric—**

General Electric Co., Schenectady, N. Y.

**Ovens, Baking, Gas Heated—**

Emil E. Steiner, Newark, N. J.

**Ovens, Baking, Wire Mill—**

Morgan Construction Co., Worcester, Mass.

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Ovens, Blueing, Wire Mill—**

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Ovens, Cabinet, Portable Baking—**

G. S. Blodgett Co., Burlington, Vt.

**Ovens, Coke—**

American Refractories Co., Commercial National Bank Bldg., Chicago, Ill.

John W. Seaver, Cleveland, O.

S. R. Smythe Co., Pittsburgh, Pa.

**Ovens, Core—**

G. S. Blodgett Co., Burlington, Vt.

Byram & Co., Inc., Detroit, Mich.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

G. Haarmann & Son, Holyoke, Mass.

Monarch Engineering & Mfg. Co., Baltimore, Md.



**Northern Engineering Works, Detroit, Mich.**

**S. Obermayer Co., Cincinnati, O.**  
**J. W. Paxson Co., 1201 N. Delaware Ave., Philadelphia, Pa.**

**Louis Sacks Foundry Co., Newark, N. J.**  
**John W. Beaver, Cleveland, O.**  
**Emil E. Steiner, Newark, N. J.**  
**Vollkommer & Co., Pittsburgh, Pa.**  
**Whiting Foundry Equipment Co., Harvey, Ill.**

#### **Ovens, Enameling—**

**American Gas Furnace Co., 23 John St., New York.**  
**G. S. Blodgett Co., Burlington, Vt.**  
**Emil E. Steiner, Newark, N. J.**  
**Turner Brass Works, Sycamore, Ill.**  
**Van Dorn Iron Works Co., Cleveland, O.**  
**Vollkommer & Co., Pittsburgh, Pa.**

#### **Ovens, Gas Enameling—**

**American Gas Furnace Co., 23 John St., New York.**  
**S. M. Howes Co., Boston, Mass.**  
**Emil E. Steiner, Newark, N. J.**  
**Vollkommer & Co., Pittsburgh, Pa.**

#### **Ovens, Gas, Gasoline and Oil—**

**Schneider & Trenkamp Division, American Stove Co., Cleveland, O.**  
**Turner Brass Works, Sycamore, Ill.**

#### **Ovens, Gas, Pastry—**

**S. M. Howes Co., Boston, Mass.**

#### **Overhanging Track Hooks—**

(See Hooks, Overhanging Track.)

#### **Overhead Tramways—**

(See Tramways, Overhead.)

#### **Ox Balls, Shoes, Yokes—**

(See Balls, Shoes, Yokes.)

#### **Ox Bow Pins—**

(See Pins, Ox Bow.)

#### **Oxidizing—**

**American Gas Machine Co., Albert Lea, Minn.**  
**Raymond Mfg. Co., Corry, Pa.**  
**Richmond Foundry & Mfg. Co., Inc., Richmond, Va.**

**W. & S. Mfg. Co., Worcester, Mass.**

#### **Oxy-Acetylene Welding—**

(See Welding, Autogenous.)

#### **Oxygen for Industrial Purposes—**

**Beltzer-Delcampe Welding Co., Bridgeport, Ct.**  
**Industrial Oxygen Co., Hanover Bank Bldg., New York.**

#### **Oyster Knives, Rivets—**

(See Knives, Rivets.)

#### **Package Protectors—**

(See Protectors, Package.)

#### **Packing Boxes, Wood—**

(See Boxes, Wood Packing.)

#### **Packing, Cup, Flange and U—**

**Graton & Knight Mfg. Co., Worcester, Mass.**  
**Jenkins Brothers, 71 John St., New York.**  
**Chas. A. Schieren & Co., 37 Ferry St., New York.**  
**Watson-Stillman Co., 50 Church St., N.Y. New York.**

#### **Packing, Hydraulic Leather—**

**Graton & Knight Mfg. Co., Worcester, Mass.**

#### **Packing, Iron Cement Sheet—**

**Smooth-On Mfg. Co., Jersey City, N. J.**  
**Packing, Jute, Hemp and Flax—**

**Broderick & Bascom Rope Co., St. Louis.**  
**A. Leachen & Sons Rope Co., St. Louis.**  
**New York Cordage Co., 83-85 Wall St., New York.**

**Walsh's Sons & Co., Newark, N. J.**

#### **Packing, Metallic Valve Rod—**

**Power Specialty Co., 111 Broadway, New York.**

#### **Packing, Oil Well—**

**American Well Works, Aurora, Ill.**  
**New York Belting & Packing Co., 91-93 Chambers St., New York.**

#### **Packing, Rubber Composition—**

**Jenkin Bros., 71 John St., New York.**  
**New York Belting & Packing Co., 91-93 Chambers St., New York.**

#### **Packing, Rubber, Self Cured—**

**Springfield Tire & Rubber Co., Springfield, O.**

#### **Packing, Valve Rod and Piston—**

**Broderick & Bascom Rope Co., St. Louis.**  
**A. Leachen & Sons Rope Co., St. Louis.**  
**New York Belting & Packing Co., 91-93 Chambers St., New York.**  
**New York Cordage Co., 83-85 Wall St., New York.**

#### **Pad Locks—**

(See Locks, Pad.)

#### **Pads, Horse Shoe, Leather—**

**Graton & Knight Mfg. Co., Worcester, Mass.**

#### **Pail and Parcel Handle Automatic Machinery—**

**Peter Gerlach Co., Cleveland, O.**

#### **Pail Clamps, Ears—**

(See Clamps, Ears.)

#### **Pail Machinery and Tools—**

**E. W. Bliss Co., Brooklyn, N. Y.**

**Peter Gerlach Co., Cleveland, O.**

#### **Pail Machinery, Lard—**

(See Lard Pail Machinery.)

#### **Pails and Tubs, Ice Cream—**

**Richmond Cedar Works, Richmond, Va.**

#### **Pails, Candy—**

**Richmond Cedar Works, Richmond, Va.**

#### **Pails, Chamber—**

**Dover Stamping & Mfg. Co., Cambridge, Mass.**

#### **Pails, Commode—**

**Northwestern Consolidated Iron & Steel Mfg. Co., Burlington, Ia.**

#### **Pails, Cream Separator—**

**Gem Mfg. Co., Boston, Mass.**

#### **Pails, Dairy—**

**Dover Stamping & Mfg. Co., Cambridge, Mass.**

**Sturges & Burn Mfg. Co., Chicago, Ill.**

#### **Pails, Dinner—**

**Dover Stamping & Mfg. Co., Cambridge, Mass.**

#### **Pails, Factory—**

(See Buckets, Factory.)

#### **Pails, Fire—**

(See Buckets, Fire.)

#### **Pails, Foundry—**

**American Woodware Mfg. Co., Toledo, O.**

W. J. Clark Co., Salem, O.  
S. Obermayer Co., Cincinnati, O.  
Osborn Mfg. Co., Cleveland, O.  
Steel Basket Co., Cedar Rapids, Ia.

**Pails, Foundry and Stable—**  
(See Buckets.)

**Pails, Galvanized—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.

Johnson Mfg. Co., Urbana, O.  
Osborn Mfg. Co., Cleveland, O.  
Steel Basket Co., Cedar Rapids, Ia.

**Pails, Glass Workers—**  
Steel Basket Co., Cedar Rapids, Ia.

**Pails, Glue Soaking—**  
Advance Machinery Co., Toledo, O.

**Pails, Lard—**  
Richmond Cedar Works, Richmond, Va.

**Pails, Sand—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.

**Pails, Spice—**  
Richmond Cedar Works, Richmond, Va.

**Pails, Steel—**  
W. J. Clark Co., Salem, O.  
Steel Basket Co., Cedar Rapids, Ia.

**Pails, Tar—**  
W. J. Clark Co., Salem, O.

**Pails, Tin—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.

Johnson Mfg. Co., Urbana, O.

**Pails, Wooden—**  
Richmond Cedar Works, Richmond, Va.

**Paint and Whitewash**  
**Spraying Machines—**  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

Deming Co., Salem, O.  
F. E. Myers & Bro., Ashland, O.  
Turner Brass Works, Sycamore, Ill.

**Paint Burners, Cans—**  
(See Burners, Cans.)

**Paint Machinery—**  
Poole Engineering & Machine Co., Baltimore, Md.

**Paint, Pigment—**  
International Acheson Graphite Co., Niagara Falls, N. Y.

**Paint Remover—**  
(See Varnish and Paint Remover.)

**Paints, Asphalt—**  
National Roofing Co., Tonawanda, N. Y.  
Thompson & Co., Allegheny, Pa.

**Paints, Barn—**  
Carpenter-Morton Co., Boston, Mass.

**Paints, Carriage and Wagon—**  
Carpenter-Morton Co., Boston, Mass.  
Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Paints, Enamel—**  
Carpenter-Morton Co., Boston, Mass.  
Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Paints, Floor—**  
Carpenter-Morton Co., Boston, Mass.  
Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Paints, Graphite Asphalt—**  
National Roofing Co., Tonawanda, N. Y.  
Thompson & Co., Allegheny, Pa.

**Paints, Paste—**  
Hazard Lead Works, Inc., Hazardville, Ct.

**Paints, Piazza, Chair—**  
Carpenter-Morton Co., Boston, Mass.

**Paints, Porch and Deck—**  
Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Paints, Ready Mixed—**  
Carpenter-Morton Co., Boston, Mass.  
Hazard Lead Works, Inc., Hazardville, Ct.  
Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Paints, Roof—**  
Asphalt Ready Roofing Co., 136 Water St., New York.

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
National Roofing Co., Tonawanda, N. Y.  
Thompson & Co., Allegheny, Pa.

**Paints, Screen—**  
Carpenter-Morton Co., Boston, Mass.  
Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Paints, Structural—**  
Asphalt Ready Roofing Co., 136 Water St., New York.

Joe. Dixon Crucible Co., Jersey City, N. J.  
National Roofing Co., Tonawanda, N. Y.  
Thompson & Co., Allegheny, Pa.

**Paints, Sailors' and Sail Makers—**  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Panel Saws—**  
(See Saws, Hand, Panel, Back, &c.)

**Pans, Acid—**  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

**Pans, Annealing, Lead—**  
Morgan Construction Co., Worcester, Mass.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

**Pans, Annealing, Steel—**  
W. J. Clark Co., Salem, O.  
Morgan Construction Co., Worcester, Mass.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

**Pans, Annealing Wire—**  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Pans, Baking—**  
(See Pans, Roasting and Baking.)

**Pans, Candy—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

**Pans, Charging—**  
W. J. Clark Co., Salem, O.  
Meehan Boiler & Construction Co., Lowellville, O.

**Pans, Clay Mixing and Ore—**  
Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.

A. Garrison Foundry Co., Pittsburgh, Pa.

**Pans, Conveyor—**  
Avery Stamping Co., Cleveland, O.  
W. J. Clark Co., Salem, O.

Link-Belt Co., Philadelphia, Pa.

**Pans, Drip—**  
(See Cups, Drip Shafting.)

**Pans, Draining—**  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

**Pans, Dry—**  
W. J. Clark Co., Salem, O.  
Meehan Boiler & Construction Co., Lowellville, O.

**Pans, Dust—**

Delphos Mfg. Co., Delphos, O.  
Dover Stamping & Mfg. Co., Cambridge,  
Mass.

**Pans, Fry—**

Avery Stamping Co., Cleveland, O.  
New York Stamping Co., Brooklyn, N. Y.

**Pans, Gem—**

S. Cheney & Son, Manlius, N. Y.  
Delphos Mfg. Co., Delphos, O.

**Pans, Grinding—**

Thos. Carlin's Sons Co., N. S. Pitts-  
burgh, Pa.

J. W. Paxson Co., 1021 N. Delaware Ave.,  
Philadelphia, Pa.

**Pans, Lath—**

W. J. Clark Co., Salem, O.  
New Britain Machine Co., New Britain,  
Ct.

Terrell's Equipment Co., Grand Rapids,  
Mich.

**Pans, Medicine—**

W. J. Clark Co., Salem, O.

**Pans, Omelet, Chafing Dish—**

New York Stamping Co., Brooklyn, N. Y.

**Pans, Pressed Galvanizing—**

American Bridge Co. of New York, 30  
Church St., New York.

**Pans, Refrigerator Drip—**

Dover Stamping & Mfg. Co., Cambridge,  
Mass.

Gem Mfg. Co., Boston, Mass.

**Pans, Roasting and Bak-  
ing—**

Lasher Mfg. Co., Davenport, Ia.

Jacob J. Vollrath Mfg. Co., Sheboygan,  
Wis.

**Pans, Scale—**

Indestructible Metal Co., 50 Church  
St., New York.

**Pans, Shop—**

W. J. Clark Co., Salem, O.  
Kilbourne & Jacobs Mfg. Co., Colum-  
bus, O.

**Pans, Steel, to Order—**

W. J. Clark Co., Salem, O.

**Pans, Sugar—**

Stuart & Peterson Co., Burlington, N. J.

**Pans, Trough—**

H. W. Caldwell & Son Co., 17th St. and  
Western Ave., Chicago, Ill.

**Pans, Vacuum—**

E. B. Badger & Sons Co., Boston, Mass.  
Buffalo Forge Co., Buffalo, N. Y.

Stuart & Peterson Co., Burlington, N. J.

**Pans, Wire—**

Buffalo Wire Works Co., Buffalo, N. Y.

**Pans, Wire Tinning, Iron—**

(See Pans, Wire.)

**Pantry Steps—**

(See Steps, Pantry.)

**Paper, Blue Print—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Paper, Building, Sheath-  
ing—**

Samuel Cabot, Inc., Boston, Mass.

**Paper, Calendars—**

(See Calendars, Paper.)

**Paper, Carborundum—**

Carborundum Co., Niagara Falls, N. Y.

**Paper, Card and Book  
Racks—**

(See Racks, Card, Book and Paper.)

**Paper Cutting Knives, &c.—**

(See Knives, &c.)

**Paper Cutters—**

(See Cutters, Paper.)

**Paper, Drawing—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Paper Files—**

(See Desk Specialties.)

**Paper, Fireproofing—**

Samuel Cabot, Inc., Boston, Mass.

**Paper Hangers' Knives,  
Shears—**

(See Knives, Shears)

**Paper, Insulating—**

Samuel Cabot, Inc., Boston, Mass.

**Paper, Micrometers for—**

(See Micrometers, Paper.)

**Paper, Sand, Garnet, Emery,  
&c.—**

Baeder, Adamson & Co., 210 Chestnut  
St., Philadelphia, Pa.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

**Paper Shells, Weights—**

(See Shells, Weights.)

**Paper, Sound Deadening—**

Samuel Cabot, Inc., Boston, Mass.

**Papers, Photoprinting—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Papers, Profile—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Parallel Clamps, Rules,  
Vises—**

(See Clamps, Rules, Vises.)

**Parallels—**

L. S. Starrett Co., Athol, Mass.

**Parers, Apple and Potato—**

Goodell Co., Antrim, N. H.  
Kilbourne Mfg. Co., Troy, N. Y.

Parker Wire Goods Co., Worcester, M<sup>ss</sup>.

Reading Hardware Co., Reading, Pa.

**Parers, Hoot—**

(See Knives, Farrier.)

**Parers, Orange—**

Goodell Co., Antrim, N. H.

**Park Fountains—**

(See Fountains, Park, Lawn, &c.)

**Parting Tools—**

(See Tools, Parting.)

**Partitions, Metal—**

Youngstown Iron & Steel Roofing Co.,  
Youngstown, O.

(See also Iron, Brass and Bronze, Orns  
metal.)

**Partitions, Wire—**

Buffalo Wire Works Co., Inc., Buffalo,  
N. Y.

Nimmo Fence & Wire Co., Norwood, O.

Stewart Iron Works Co., Cincinnati, O.

Wright Wire Co., Worcester, Mass.

**Paste, Asbestos Dry—**

H. B. Fuller, St. Paul, Minn.

**Paste, Dry, Cold Water—**

H. B. Fuller, St. Paul, Minn.

**Paste, Wet—**

H. B. Fuller, St. Paul, Minn.

**Patch Bolts—**

(See Bolts, Boiler, Patch.)

**Patent Attorneys—**

Howson & Howson, 32 So. Broad St.,  
Philadelphia, Pa.

E. B. Stocking, Washington, D. C.

**Pattern Letters—**

(See Letters, Pattern.)

**Pattern Makers' Dowels—**

(See Dowels, Pattern Makers.)

**Pattern Makers' Machinery—**

Badger State Machine Co., Janesville, Wis.  
Fox Machine Co., Grand Rapids, Mich.  
Greaves, Klusman & Co., Cincinnati, O.  
Hobbs Mfg. Co., Worcester, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Oliver Machinery Co., Grand Rapids, Mich.

**MERCHANTS.**

Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.  
Hill, Clarke & Co., Boston, Mass.  
J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.  
A. D. White Machinery Co., 27-31 S. Jefferson St., Chicago, Ill.  
Wickes Bros., Saginaw, Mich.

**Pattern Makers' Supplies—**

Cleveland Galvanized Works Co., Cleveland, O.  
S. Obermayer Co., Cincinnati, O.  
Oliver Machinery Co., Grand Rapids, Mich.

**Pattern Making—**

Abendroth & Root Mfg. Co., Newburgh, N. Y.  
Acme Steel & Malleable Iron Works, Buffalo, N. Y.  
Badger State Machine Co., Janesville, Wis.  
Bancroft & Co., Philadelphia, Pa.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Blake & Johnson Co., Waterbury, Ct.  
Case Crane Co., Columbus, O.  
S. Cheney & Son, Manlius, N. Y.  
Cleveland Punch & Shear Works Co., Cleveland, O.  
Charles F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.  
Empire Foundry Co., New Brunswick, N. J.  
Eynon-Evans Mfg. Co., 1507 Clearfield St., Philadelphia, Pa.  
A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.  
Forest City Foundry & Mfg. Co., Cleveland, O.  
Wm. Gardam & Son, Inc., 221 Fulton St., New York.  
Hopson & Chapin Mfg. Co., New London, Ct.  
R. E. Kidder, Worcester, Mass.  
M. I. Smith, Bristol, Ct.  
Susquehanna Casting Co., Wrightsville, Pa.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
York Pattern Works, York, Pa.  
**Pattern Making, Metal—**  
Acme Steel & Malleable Iron Works, Buffalo, N. Y.  
Bancroft & Co., Philadelphia, Pa.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Blake & Johnson Co., Waterbury, Ct.  
Clark Novelty Co., Rochester, N. Y.  
Columbia Grey Iron Co., Columbia, Pa.  
Excelsior Tool & Machine Co., E. St. Louis, Ill.  
Grant Mfg. & Machine Co., Bridgeport, Ct.  
Hubley Mfg. Co., Lancaster, Pa.

R. E. Kidder, Worcester, Mass.  
W. B. Knight Machinery Co., St. Louis, Mo.  
Palmer & DeMooy Foundry Co., Cleveland, O.  
Susquehanna Casting Co., Wrightsville, Pa.

**York Pattern Works, York, Pa.**

**Patterns, Architectural—**

York Pattern Works, York, Pa.

**Patterns for Name Plates—**

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

**Raving Hammers—**

(See Hammers, Paving.)

**Peavies—**

Peter Gerlach Co., Cleveland, O.

**Pedal Machines, Bicycle—**

Garvin Machine Co., Spring & Varick Sts., New York.

**Pedals, Bicycle—**

John R. Keim Mills, Inc., Buffalo, N. Y.

**Pedals, Piano—**

Susquehanna Casting Co., Wrightsville, Pa.

**Peg Awls—**

(See Awls, Peg.)

**Pen Wipers—**

(See Desk Specialties, Silver Plated.)

**Pencil Attachments, Di-**

**vider—** Keuffel & Esser Co., 127 Fulton St., N. Y.

**Pencils, Lead—**

Jos. Dixon Crucible Co., Jersey City, N. J.

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Penstocks—**

Franklin Boiler Works Co., Troy, N. Y.

Humphrey Machine Co., Keene, N. H.

E. Keeler Co., Williamsport, Pa.

Poole Engineering & Machine Co., Baltimore, Md.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Wm. B. Scaife & Sons Co., Pittsburgh.

**Peppers and Salts, Alumi-**

**num—** Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

**Peppers and Salts, Silver**

**and Silver Plated—**

International Silver Co., Meriden, Ct.

**Percolators—**

Dover Stamping & Mfg. Co., Cambridge, Mass.

Manhattan Perforated Metal Co., 237 Centre St., New York.

Stuart & Peterson Co., Burlington, N. J.

**Percolators, Coffee—**

International Silver Co., Meriden, Ct.

Landers, Frary & Clark, New Britain, Ct.

**Percolators, Electric Coffee—**

General Electric Co., Schenectady, N. Y.

**Percussion Caps—**

(See Caps, Percussion.)

**Perforated Brass, Metal—**

(See Brass, Metal.)

**Perforated Metals—**

(See Metals, Perforated Sheet.)

**Perforated Sheet Metal—**

(See Metal, Perforated Sheet.)

**Perforating Machines—**

E. W. Bliss Co., Brooklyn, N. Y.

Hillies & Jones Co., Wilmington, Del.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

- R. Woodman Mfg. & Supply Co., Boston.**  
**Perforating Machines—**  
**Metal—**  
 (See Presses, Perforating Metal.)  
**Pestles—**  
 (See Mortars and Pestles.)  
**Pew Book Racks—**  
 (See Racks, Pew Book.)  
**Phonographs—**  
 (See Agents, Phonograph.)  
**Phosphate Rock Machinery—**  
 Poole Engineering & Machine Co., Baltimore, Md.  
**Phosphor-Bronze—**  
 (See Bronze, Phosphor.)  
**Phosphor-Bronze Ingots—**  
 (See Ingots.)  
**Phosphor-Tin—**  
 (See Tin, Phosphor.)  
**Phosphorizers—**  
 Joseph Dixon Crucible Co., Jersey City, N. J.  
 McCullough-Dalzell Crucible Co., Pittsburgh, Pa.  
**Phosphorus—**  
 Crescent Phosphorized Metal Co., Philadelphia, Pa.  
**Photo Engraving—**  
 (See Engraving, Photo and Wood.)  
**Photograph Frames—**  
 (See Frames, Photograph.)  
**Piano Action Machinery—**  
 A. H. Nilson Machine Co., Bridgeport, Ct.  
**Piano and Organ Hardware—**  
 Blake & Johnson Co., Waterbury, Ct.  
 Progressive Mfg. Co., Torrington, Ct.  
**Piano and Organ Tools—**  
 (See Tools, Piano and Organ.)  
**Piano Bellows, Lamps—**  
 (See Bellows, Lamps.)  
**Piano Frames—**  
 Henry Perkins Co., Bridgewater, Mass.  
**Piano Hinge Machinery—**  
 (See Hinge Machinery, Automatic.)  
**Piano Parts, Steel—**  
 Clark Novelty Co., Rochester, N. Y.  
**Pickers, Flower and Fruit—**  
 Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.  
 Parker Wire Goods Co., Worcester, Mass.  
 Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
 Wire Goods Co., Worcester, Mass.  
**Pickers, Loom—**  
 Graton & Knight Mfg. Co. Worcester, Mass.  
**Picket Chains—**  
 (See Chains, Picket.)  
**Pickets, Wire—**  
 Cyclone Fence Co., Waukegan, Ill.  
**Pickle Casters—**  
 (See Casters, Silver Plated.)  
**Pickling Machines—**  
 Mesta Machine Co., Pittsburgh, Pa.  
**Picks and Awls, Ice—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Elmore Tool Mfg. Co., Hartford, Ct.  
 Erie Specialty Co., Erie, Pa.  
 Fanner Mfg. Co., Cleveland, O.  
 Gifford-Wood Co., Arlington, Mass.  
 Landers, Frary & Clark, New Britain, Ct.  
 H. H. Mayhew Co., Shelburne Falls, Mass.  
 Parker Wire Goods Co., Worcester, Mass.  
 Peck, Stow & Wilcox Co., 21 Murray St., New York.  
 Snell Mfg. Co., Fiskdale, Mass.  
 Stanley Rule & Level Co., New Britain, Ct.  
 James Swan Co., Seymour, Ct.  
 Tuck Mfg. Co., Brockton, Mass.  
 Wrightsville Hardware Co., Wrightsville, Pa.  
**Picks and Mattocks—**  
 Hubbard & Co., Pittsburgh, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Picks, Boiler—**  
 Hubbard & Co., Pittsburgh, Pa.  
**Picks, Coal—**  
 Hubbard & Co., Pittsburgh, Pa.  
**Picks, Concrete—**  
 Hubbard & Co., Pittsburgh, Pa.  
**Picks, Contractors—**  
 Hubbard & Co., Pittsburgh, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Picks, Drifting—**  
 Hubbard & Co., Pittsburgh, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Picks, Ice—**  
 (See Picks and Awls, Ice.)  
**Picks, Locomotive Coal—**  
 Hubbard & Co., Pittsburgh, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Picks, Mill—**  
 Hubbard & Co., Pittsburgh, Pa.  
**Picks, Mining—**  
 Hubbard & Co., Pittsburgh, Pa.  
**Picks, Nut—**  
 American Cutlery Co., Chicago, Ill.  
 International Silver Co., Meriden, Ct.  
 Landers, Frary & Clark, New Britain, Ct.  
**Picks, Ore and Rock—**  
 Hubbard & Co., Pittsburgh, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Picks, Poll—**  
 Hubbard & Co., Pittsburgh, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Picks, Puncher—**  
 Hubbard & Co., Pittsburgh, Pa.  
**Picks, Railroad—**  
 (See Picks and Mattocks.)  
**Picks, Stone and Quarry—**  
 Hubbard & Co., Pittsburgh, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Picks, Surface—**  
 Hubbard & Co., Pittsburgh, Pa.  
**Picks, Tamping—**  
 Hubbard & Co., Pittsburgh, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Picture Chains, Cord, Knobs, Nails—**  
 (See Chains, Cord, Knobs, Nails.)  
**Pie Machines—**  
 (See Bakers' and Confectioners' Tools, Machines, &c.)  
**Pie Racks, Tins—**  
 (See Racks, Bakery, Tins.)  
**Piezometers—**  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
**Pilasters, Panels, &c.—**  
 (See Architectural Sheet Metal Work.)  
**Pile Drivers—**  
 (See Drivers, Pile.)  
**Piling, Sheet Steel—**  
 Carnegie Steel Co., Pittsburgh, Pa.  
 National Tube Co., Pittsburgh, Pa.

**Pillars, Gas, Brass—**  
U. T. Hungerford Brass & Copper Co.,  
497-505 Pearl St., New York.

**Pillow Blocks—**  
(See Blocks, Pillow.)

**Pin Machinery—**  
Baird Machine Co., Oakville, Ct.  
E. J. Manville Machine Co., Waterbury,  
Ct.

**Pin Machines, Badge—**  
Baird Machine Co., Oakville, Ct.

**Pin Machines, Safety—**  
Baird Machine Co., Oakville, Ct.  
E. J. Manville Machine Co., Waterbury,  
Ct.

**Pin Sticking Machines—**  
Baird Machine Co., Oakville, Ct.

**Pin Vises—**  
(See Vises, Hand.)

**Pin Wire—**  
(See Wire, Pin.)

**Pincers—**  
Bridgeport Hardware Mfg. Co., Bridge-  
port, Ct.  
Heiter Bros. Co., Newark, N. J.  
Fack, Stock & Wilcox Co., 27 Murray St.,  
New York.  
Louis Sachs, Newark, N. J.  
Wiebusch & Hilger, Ltd., 106-110 Lafay-  
ette St., New York.  
Wrightsville Hardware Co., Wrightsville,  
Pa.

**Pinch Bars—**  
(See Pushers, Car.)

**Pinions for Electric Rail-  
ways—**  
E. W. Bliss Co., Brooklyn, N. Y.  
Van Dorn & Dutton Co., Cleveland, O.

**Pinions, Roll—**  
Mackintosh, Hemphill & Co., Pittsburgh,  
Pa.  
Mesta Machine Co., Pittsburgh, Pa.  
Morgan Construction Co., Worcester,  
Mass.  
Philadelphia Roll & Machine Co., 23d St.  
& Washington Ave., Philadelphia.  
Seaman-Sleeth Co., Pittsburgh, Pa.

**Pins, Air Brake—**  
American Iron & Steel Mfg. Co., Leba-  
non, Pa.  
New Castle Forge & Bolt Co., New  
Castle, Pa.

**Pins, Belaying—**  
Boston & Lockport Block Co., East Bos-  
ton, Mass.  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Pins, Blanket—**  
F. E. Kohler & Co., Canton, O.

**Pins, Block, Tackle—**  
Boston & Lockport Block Co., East Bos-  
ton, Mass.

**Pins, Bowling—**  
(See Balls and Pins.)

**Pins, Car Coupling—**  
Keystone Drop Forge Works, Chester, Pa.  
New Castle Forge & Bolt Co., New  
Castle, Pa.  
Standard Chain Co., Pittsburgh, Pa.

**Pins, Caster—**  
Atlas Bolt & Screw Co., Cleveland, O.

**Pins, Clothes—**  
Demeritt & Palmer Packing Co., Water-  
bury, Vt.  
C. C. Putnam & Son, Putnamville, Vt.  
Richmond Cedar Works, Richmond, Va.  
United States Clothes Pin Co., Mont-  
pelier, Vt.

**Pins, Clothes, Spring—**  
Demeritt & Palmer Packing Co., Water-  
bury, Vt.  
C. C. Putnam & Son, Putnamville, Vt.  
United States Clothes Pin Co., Mont-  
pelier, Vt.

**Pins, Crank—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
B. M. Jones & Co., Inc., Boston, Mass.  
Pennsylvania Forge Co., Philadelphia, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Tindell-Morris Co., Eddystone, Pa.

**Pins, Dowel—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
A. G. Butler, 234-236 Pearl St., N. Y.  
Grand Crossing Tack Co., Grand Cross-  
ing, Ill.  
Milwaukee Tack Co., Milwaukee, Wis.  
Oliver Machinery Co., Grand Rapids,  
Mich.  
Parker Wire Goods Co., Worcester, Mass.  
J. W. Paxson Co., 1021 N. Delaware Ave.,  
Philadelphia, Pa.  
Pittsburgh Steel Co., Pittsburgh, Pa.  
Progressive Mfg. Co., Torrington, Ct.  
E. H. Titchener & Co., Binghamton,  
N. Y.  
Youngstown Sheet & Tube Co., Youngs-  
town, O.

**Pins, Drapery—**  
Turner & Stanton Co., Norwich, Ct.

**Pins, Drawing—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Pins, Drift—**  
Cleveland Punch & Shear Works Co.,  
Cleveland, O.  
Oliver Iron & Steel Co., Pittsburgh, Pa.

**Pins, Drugget—**  
Turner & Stanton Co., Norwich, Ct.

**Pins, Escutcheon, Brass and  
Iron—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Blake & Johnson Co., Waterbury, Ct.  
Bridgeport Brass Co., 23 B'way, N. Y.  
Globe-Taunton Nail Co., Taunton, Mass.  
Grand Crossing Tack Co., Grand Cross-  
ing, Ill.  
John Hassall, Brooklyn, N. Y.  
Homer F. Livermore, Boston, Mass.  
Milwaukee Tack Co., Milwaukee, Wis.  
Parker Wire Goods Co., Worcester, Mass.  
Arthur T. Rutter & Co., 256 Broadwa.,  
New York.

**Pins, Escutcheon, Copper—**  
John Hassall, Brooklyn, N. Y.

**Pins, Escutcheon, German  
Silver—**  
John Hassall, Brooklyn, N. Y.

**Pins, Glass Push—**  
Turner & Stanton Co., Norwich, Ct.

**Pins, Hair—**  
Blake & Johnson Co., Waterbury, Ct.

**Pins, Hinge—**  
Atlas Bolt & Screw Co., Cleveland, O.  
National-Acme Mfg. Co., Cleveland, O.  
Reed & Prince Mfg. Co., Worcester,  
Mass.

**Pins, Insulator Expansion—**  
Diamond Expansion Bolt Co., 90 West  
St., New York.  
Star Expansion Bolt Co., 147-149 Cedar  
St., New York.

**Pins, Knuckle—**

American Iron & Steel Mfg. Co., Lebanon, Pa.  
 American Steel Foundries, 42 Broadway, New York.  
 New Castle Forge & Bolt Co., New Castle, Pa.  
 Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

**Pins, Lariat and Picket—**

(See Lariat and Picket Pins.)

**Pins, Ox Bow—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Pins, Piano, Brass and Aluminum—**

Bridgeport Brass Co., 253 Broadway, N. Y.

**Pins, Pole—**

(See Telegraph and Telephone Supplies.)

**Pins, Reach—**

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Pins, Regalia—**

Wire Goods Co., Worcester, Mass.

**Pins, Register—**

Atlas Bolt & Screw Co., Cleveland, O.

**Pins, Rolling—**

Wm. R. Hartigan, Collinsville, Ct.

John Sommer Faucet Co., Newark, N. J.

**Pins, Sash—**

Grand Crossing Tack Co., Grand Crossing, Ill.

W. & J. Tiebout, 118 Chambers St., N. Y.

**Pins, Shelf—**

Parker Wire Goods Co., Worcester, Mass.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Wire Goods Co., Worcester, Mass.

**Pins, Taper—**

Chicago Screw Co., 2 Canal St., Chicago, Ill.

Detroit Screw Works, Detroit, Mich.

Hartford Machine Screw Co., Hartford, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

National-Acme Mfg. Co., Cleveland, O.

New Haven Machine Screw Co., New Haven, Ct.

Pratt & Whitney Co., Hartford, Ct.

Standard Tool Co., Cleveland, O.

Worcester Machine Screw Co., Worcester, Mass.

**Pins, Ten—**

(See Balls and Pins.)

**Pins, Ties—**

Boston & Lockport Block Co., East Boston, Mass.

Piqua Handle & Mfg. Co., Piqua, O.

**Pins, Toilet, Bank, &c.—**

Plume & Atwood Mfg. Co., Waterbury, Ct.

**Pipe and Fittings, Warm****Air Furnace—**

H. E. Hessler Co., Syracuse, N. Y.

S. M. Howes Co., Boston, Mass.

**Pipe Bending and Cutting—**

Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

National Pipe Bending Co., New Haven, Ct.

Walworth Mfg. Co., Boston, Mass.  
 Whiteoak Coil Pipe Co., Hartford, Ct.

**Pipe Bending Machines—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Standard Engineering Co., Eliwood City, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Stoever Foundry & Mfg. Co., Myerstown, Pa.

Prentiss Tool & Supply Co., 115 Liberty St., New York.  
 Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.  
 Vandyck, Churchill Co., 8 Dey St., N. Y.  
 A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
 Wickes Bros., Saginaw, Mich.

**Pipe Cutting, to Order—**  
 Eagle Metal & Supply Co., Brooklyn, N. Y.

**Pipe, Doubled Refined Puddled Iron—**  
 Youngstown Sheet & Tube Co., Youngstown, O.

**Pipe, Flanged—**  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 American Cast Iron Pipe Co., Birmingham, Ala.

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.  
 A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.  
 Lynchburg Foundry Co., Lynchburg, Va.  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

**Pipe Flanges and Unions—**  
 (See Unions, Pipe.)

**Pipe, Flexible Joint—**  
 United States Cast Iron Pipe & Foundry Co., 71 Broadway, New York.

**Pipe, Galvanized—**  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.  
 Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
 La Belle Iron Works, Steubenville, O.  
 National Tube Co., Pittsburgh, Pa.  
 Youngstown Sheet & Tube Co., Youngstown, O.

**Pipe, Galvanized Riveted—**  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 Wm. B. Scaife & Sons Co., Pittsburgh.  
 Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

**Pipe Hanger Tongs—**  
 (See Tongs, Pipe Hanger.)

**Pipe Hook Plates, Steel—**  
 (See Plates, Pipe Hook, Steel.)

**Pipe, Hydraulic, Steel Riveted—**  
 American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

**Pipe, Hydraulic, Steel Welded—**  
 American Welding Co., Carbondale, Pa.

**Pipe, Lead—**  
 Chas. Millar & Son Co., Utica, N. Y.

**Pipe, Line and Drive—**  
 La Belle Iron Works, Steubenville, O.  
 Reliance Tube Co., Ltd., Pittsburgh, Pa.

**Pipe Machinery, Briar—**  
 Chas. Leffler & Co., Brooklyn, N. Y.

**Pipe Machines, Stove—**  
 Alexander Bros., Carnegie, Pa.

**Pipe, Merchant—**  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 American Cast Iron Pipe Co., Birmingham, Ala.

Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
 La Belle Iron Works, Steubenville, O.  
 National Tube Co., Pittsburgh, Pa.  
 Reliance Tube Co., Ltd., Pittsburgh, Pa.  
 Youngstown Sheet & Tube Co., Youngstown, O.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.  
 C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.  
 McDowell & Co., Allegheny, Pa.  
 Edgar M. Moore & Co., Pittsburgh, Pa.  
 Frank Samuel, 15th and Market Sts., Philadelphia, Pa.  
 Scully Steel & Iron Co., 69 No. Halsted St., Chicago, Ill.  
 Shook & Fletcher, Birmingham, Ala.  
 Jacob Ullman, Buffalo, N. Y.  
 Wickes Bros., Saginaw, Mich.  
 Woodward, Wight & Co., Ltd., New Orleans, La.

**Pipe Mill Machinery—**  
 Fawcuss Machine Co., Pittsburgh, Pa.  
 A. Garrison Foundry Co., Pittsburgh, Pa.  
 Stoeber Foundry & Mfg. Co., Myerstown, Pa.

Taylor-Wilson Mfg. Co., McKees Rocks, Pa.  
 United Engineering & Foundry Co., Pittsburgh, Pa.

**Pipe Mill Machinery, Clay—**  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Pipe Mill Machinery, Clay Sewer—**  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Pipe, Oil Well—**  
 La Belle Iron Works, Steubenville, O.  
 National Tube Co., Pittsburgh, Pa.  
 Reliance Tube Co., Ltd., Pittsburgh, Pa.  
 Youngstown Sheet & Tube Co., Youngstown, O.

**Pipe Plants, Riveted—**  
 Hilles & Jones Co., Wilmington, Del.

**Pipe Polishing Machines—**  
 Standard Engineering Co., Ellwood City, Pa.

**Pipe Railing—**  
 (See Railing and Brackets.)

**Pipe, Riveted Steel—**  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.

American Bridge Co. of New York, 30 Church St., New York.  
 American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

Baltimore Bridge Co., Baltimore, Md.  
 E. Keeler Co., Williamsport, Pa.  
 Meehan Boiler & Construction Co., Lowellville, O.

Pennsylvania Engineering Works, New Castle, Pa.

Petroleum Iron Works Co., Sharon, Pa.  
 Phoenix Iron Co., 410 Walnut St., Philadelphia, Pa.

Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

Riter-Conley Mfg. Co., Pittsburgh, Pa.  
 Wm. B. Scaife & Sons Co., Pittsburgh.  
 Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

Tudor Boiler Mfg. Co., Cincinnati, O.



Warren City Tank & Boiler Co., Warren, O.

**Pipe, Sewer and Culvert—**  
Chas. Millar & Son Co., Utica, N. Y.

**Pipe Sleeve Nuts—**  
(See Nuts, Pipe Sleeve.)

**Pipe Socket Reaming Machines—**

National Machinery Co., Tiffin, O.  
Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

**Pipe Socket Tapping Machines—**

National Machinery Co., Tiffin, O.  
Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

**Pipe, Soil—**  
(See Pipe, Cast Iron.)

**Pipe, Spiral Riveted—**  
Abendroth & Root Mfg. Co., Newburgh, N. Y.

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

**Pipe, Steel—**  
Abendroth & Root Mfg. Co., Newburgh, N. Y.

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

E. Keeler Co., Williamsport, Pa.  
La Belle Iron Works, Steubenville, O.

National Tube Co., Pittsburgh, Pa.  
Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Wm. E. Scaff & Sons Co., Pittsburgh.  
Youngstown Sheet & Tube Co., Youngstown, O.

#### MERCHANTS.

Bourne-Fuller Co., Cleveland, O.  
Edmund W. Mudge & Co., Pittsburgh, Pa.

Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.

Shook & Fletcher, Birmingham, Ala.  
Wickes Bros., Saginaw, Mich.

**Pine, Stove—**  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

S. M. Howes Co., Boston, Mass.  
Ohio Stove Pipe & Mfg. Co., New Philadelphia, O.

Parkersburg Iron & Steel Co., Parkersburg, W. Va.

**Pipe Straightening Machines—**  
(See Straightening Machines, Pipe.)

**Pine Strainers, Conductor—**  
(See Strainers, Conductor Pipe.)

**Pipe Testing Machines—**  
(See Testing Presses, Pipe.)

**Pipe Unions—**(See Unions, Pipe.)

**Pine Wrenches, Adjustable S—**  
(See Wrenches, Adjustable S Pipe.)

**Pipe, Wrought Iron—**  
(See Pipe, Merchant.)

**Pipes, Blow—**  
Penn Engineering Works, New Castle, Pa.

**Pipes, Chain—**  
Thomas Laughlin Co., Portland, Me.

W. J. Tiebout, 118 Chambers St., N. Y.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Pining Work, Galvanized—**  
Abendroth & Root Mfg. Co., Newburgh, N. Y.

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

**Piping Work, Oil, Acid and Corrosion Proof—**

Indestructible Metal Co., 50 Church St., New York.

**Pistols and Revolvers—**  
Colt's Patent Fire Arms Mfg. Co., Hartford, Ct.

Remington Arms Co., 313 Broadway, N. Y.  
Otis A. Smith, Rockfall, Ct.

J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

**Piston Packing, Rings, Rods—**  
(See Packing, Rings, Rods.)

**Pitcher Spout Pumps—**  
(See Pumps, Cistern, Pitcher, Spout, &c.)

**Pitchers, Beer, Wine, Syrup, &c., Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Pitching Machines, Barrel and Keg—**

Pawling & Harnischfeger, Milwaukee, Wis.

**Pits, Soaking—**  
G. W. McClure, Son & Co., Pittsburgh.

Wm. Swindell & Bros., Pittsburgh, Pa.  
Vollkommer & Co., Pittsburgh, Pa.

**Pivots, Door—**  
Joseph Bardsley, 147 Baxter St., N. Y.

Bommer Bros., Brooklyn, N. Y.  
Lawson Mfg. Co., 40 Dearborn St., Chicago, Ill.

**Plaiters—**  
North Bros. Mfg. Co., Philadelphia, Pa.

**Plane Gauges, Irons, Handles—**  
(See Gauges, Irons, Handles.)

**Plane Stops—**  
(See Stops, Plane.)

**Planer Centers, Chucks, &c.—**  
(See Centers, Chucks, &c.)

**Planer Knife Grinders—**  
(See Grinders.)

**Planers, Armor Plate—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

**Planers, Bevel Gear—**  
Gleason Works, Rochester, N. Y.

Schuchardt & Schutte, 90 West St., N. Y.

**Planers, Buzz—**  
Badger State Machine Co., Janesville, Wis.

Crescent Machine Co., Leontonia, O.  
Fox Machine Co., Grand Rapids, Mich.

Greaves, Klusman & Co., Cincinnati, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Oliver Machinery Co., Grand Rapids, Mich.

#### MERCHANTS.

Hill, Clarke & Co., Boston, Mass.  
Wickes Bros., Saginaw, Mich.

**Planers, Duplex, Cut Both Ways—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Woodward & Powell Planer Co., Worcester, Mass.

**Planers, Electrically Driven—**

American Tool Works Co., Cincinnati, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Planers, Fluting Feed Rolls, for Textile Machinery—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Woodward & Powell Planer Co., Worcester, Mass.

**Planers, Frog and Switch—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Woodward & Powell Planer Co., Worcester, Mass.

**Planers, Gear—**

Gleason Works, Rochester, N. Y.

**Planers, Geared Drive—**

Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

**Planers, Locomotive Cylinder and Frame—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Morton Mfg. Co., Muskegon Heights, Mich.

Woodward & Powell Planer Co., Worcester, Mass.

**Planers, Locomotive Rod—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Planers, Metal—**

American Tool Works Co., Cincinnati, O.  
Cincinnati Planer Co., Cincinnati, O.  
Cincinnati Shaper Co., Cincinnati, O.

Detrick & Harvey Machine Co., Baltimore, Md.

Garvin Machine Co., Spring and Varick Sts., New York.

Edwin Harrington, Son & Co., Inc., Philadelphia, Pa.

Hilles & Jones Co., Wilmington, Del.

J. J. McCabe, 14 Dey St., New York.

New Haven Mfg. Co., New Haven, Ct.

Niles-Bement-Pond Co., 111 Broadway, New York.

Taylor Machinery Co., Boston, Mass.

Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.

W. A. Wilson Machine Co., Rochester, N. Y.

Woodward & Powell Planer Co., Worcester, Mass.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.

W. R. Beatty Machinery & Equipment Co., Pittsburgh, Pa.

Brown & Zortman Machinery Co., Pittsburgh, Pa.

Hill, Clarke & Co., Boston, Mass.

McDowell, Stocker & Co., 59 S. Canal St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85-59 Liberty St., New York.

Marshall & Husehart Machinery Co., 62-64 So. Canal St., Chicago, Ill.

Edgar M. Moore & Co., Pittsburgh, Pa.

Match & Merryweather Machinery Co., Cleveland, O.

Prentiss Tool & Supply Co., 115 Liberty St., New York.

F. P. Schlelein Machinery Co., Pittsburgh, Pa.

Sebastian Lathe Co., Cincinnati, O.

L. F. Seyfert's Sons, Inc., 437-441 N. 3d St., Philadelphia, Pa.

H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.

Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.

Jacob Ullman, Buffalo, N. Y.

Vandyck, Churchill Co., 8 Dey St., N. Y.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit.

**Planers, Miter—**

Miller Falls Co., 28 Warren St., N. Y.

**Planers, Open Side—**

Detrick & Harvey Machine Co., Baltimore, Md.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

F. R. Patch Mfg. Co., Rutland, Vt.

**Planers, Plate—**

Cleveland Punch & Shear Works Co., Cleveland, O.

Detrick & Harvey Machine Co., Baltimore, Md.

Hilles & Jones Co., Wilmington, Del.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Wickes Bros., Saginaw, Mich.

**Planers, Portable—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morton Mfg. Co., Muskegon Heights, Mich.

**Planers, Radius Link—**

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Planers, Rotary—**

Cleveland Punch & Shear Works Co., Cleveland, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Newton Machine Tool Works, 23d & Vine Sts., Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

Tindel-Morris Co., Eddystone, Pa.

H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

**Planers, Stone—**

American Tool Works Co., Cincinnati, O.

Birmingham Iron Foundry, Derby, Ct.

Farral Foundry & Mach. Co., Ansonia, Ct.

J. Gilmour, Bennett Bldg., New York.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

F. R. Patch Mfg. Co., Rutland, Vt.

**Planers, Switch Point—**

Woodward & Powell Planer Co., Worcester, Mass.

**Planers, Valve Seat—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway, New York.

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

- H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.
- Planers, Wall—**  
Niles-Bement-Pond Co., 111 Broadway, New York.
- Planers, Wood Working—**  
Badger State Machine Co., Inc., Janesville, Wis.  
Crescent Machine Co., Leetonia, O.  
Greaves, Klusman & Co., Cincinnati, O.  
Hobbs Mfg. Co., Worcester, Mass.  
Humphrey Machine Co., Keene, N. H.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Lane Mfg. Co., Montpelier, Vt.  
Oliver Machinery Co., Grand Rapids, Mich.  
Robertson Mfg. Co., Buffalo, N. Y.
- Planers, Wood Working Hand—**  
Crescent Machine Co., Leetonia, O.  
Greaves, Klusman & Co., Cincinnati, O.
- Planes, Ice—**  
(See Ice Harvesting Tools.)
- Planes, Iron—**  
Stanley Rule & Level Co., New Britain, Ct.  
Union Mfg. Co., New Britain, Ct.
- Planes, Variable Bench—**  
Otis A. Smith, Rockfall, Ct.
- Planes, Wood—**  
Chapin-Stephens Co., Pine Meadow, Ct.  
Stanley Rule & Level Co., New Britain, Ct.  
Union Mfg. Co., New Britain, Ct.
- Planimeters—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.  
Crosby Steam Gauge & Valve Co., Boston.  
Keuffel & Esser Co., 127 Fulton St., N. Y.
- Planing Mill Machinery—**  
Badger State Machine Co., Inc., Janesville, Wis.  
Greaves, Klusman & Co., Cincinnati, O.  
Hobbs Mfg. Co., Worcester, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Oliver Machinery Co., Grand Rapids, Mich.  
Wickes Bros., Saginaw, Mich.
- Plantation Checks—**  
(See Checks, Plantation.)
- Planters and Drills, Corn—**  
Hayes Pump & Planter Co., Galva, Ill.  
Keystone Farm Machine Co., York, Pa.  
F. E. Kohler & Co., Canton, O.
- Planters, Cotton—**  
Keystone Farm Machine Co., York, Pa.  
R. W. Whitehurst Co., Norfolk, Va.
- Planters, Hoes—**  
(See Hoes, Eye.)
- Planters, Peanut—**  
R. W. Whitehurst Co., Norfolk, Va.
- Planters, Potato—**  
Bateman Mfg. Co., Grenloch, N. J.
- Plaster and Lath Substitutes—**  
Asbestos Protected Metal Co., Canton, Mass.
- Plastering Trowels—**  
(See Trowels, Brick, Plastering, &c.)
- Plate, Armor—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.
- Plate, Black, for Deep Stamping—**  
American Sheet & Tin Plate Co., Pittsburgh, Pa.  
Empire Iron & Steel Co., Niles, O.
- Plate, Black, for Tinning—**  
American Sheet and Tin Plate Co., Pittsburgh, Pa.  
Empire Iron & Steel Co., Niles, O.
- Plate Casters, Hinges—**  
(See Casters, Hinges.)
- Plate Handles, Wire—**  
(See Household Articles, Wire.)
- Plate, Tack—**  
La Belle Iron Works, Steubenville, O.
- Plate, Tin and Terne—**  
American Sheet and Tin Plate Co., Pittsburgh, Pa.  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
Delphos Mfg. Co., Delphos, O.  
Follansbee Bros. Co., Pittsburgh, Pa.  
Merchant & Evans Co., 517 Arch St., Philadelphia, Pa.  
Standard Tin Plate Co., Canonsburg, Pa.
- MERCHANTS.**  
Arthur C. Harvey Co., Boston, Mass.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.  
Waite, Ranlet & Co., Boston, Mass.
- Plate Washers—**  
(See Washers, Wrought.)
- Platers' Metal—**  
(See Metal, Platers' or Gold.)
- Platers, Metal or Gold—**  
(See Metal.)
- Platers' Supplies—**  
(See Polishing and Buffing Supplies.)
- Plates and Hooks, Window—**  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Yale & Towne Mfg. Co., 9 Murray St., New York.
- Plates and Signs, Post Office—**  
Eagle Lock Co., Terryville, Ct.
- Plates and Stubs, Store Shutter—**  
(See Stubs and Plates, Store Shutter.)
- Plates and Wheels, Sheave—**  
Mathew Lanz & Sons, Pittsburgh, Pa.
- Plates, Ball Mill—**  
Taylor Iron & Steel Co., High Bridge, N. J.
- Plates, Bed—**  
Morgan Spring Co., Worcester, Mass.
- Plates, Bolster—**  
American Steel Foundries, 42 Broadway, New York.  
S. Cheney & Son, Manlius, N. Y.  
Oliver Iron & Steel Co., Pittsburgh, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Western Foundry & Sash Weight Co., 2d and Miller Sts., St. Louis, Mo.
- Plates, Brass Name, Side-walk—**  
Cleveland Galvanizing Works Co., Cleveland, O.
- Plates, Brass Step—**  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Plates, Breast-Auger—**  
Hubbard & Co., Pittsburgh, Pa.

**Plates, Building—**  
(See Iron Work, Builders'.)

**Plates, Car, Ball Bearing**  
**Center—**

T. H. Symington Co., Baltimore, Md.

**Plates, Carriage and**  
**Wagon—**

(See Plates, Name.)

**Plates, Cement Mill—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Thomas Prosser & Son, 26 Platt St., N.Y.

**Plates, Centrifugal Machine**  
**Perforated—**

Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 224

N. Union St., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.  
Manhattan Perforated Metal Co., 237

Centre St., New York.

Chas. Mundt & Sons, 441 Pearl St., N. Y.

**Plates, Cooling—**

Bancroft & Co., Philadelphia, Pa.

**Plates, Coupling—**

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Plates, Deck or Man Hole—**

Keystone Steel Co., Wilmington, Del.  
W. & J. Tiebout, 118 Chambers St., N. Y.

**Plates, Die—**

Butterfield & Co., Derby Line, Vt.  
Chattanooga Roofing & Foundry Co.,

Chattanooga, Tenn.

Wiley & Russell Mfg. Co., Greenfield,  
Mass.

**Plates, Door—**

Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette

St., New York.

Schwerdtle Stamp Co., Bridgeport, Ct.

Turner Brass Works, Sycamore, Ill.

**Plates, Drop Letter—**

Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette

St., New York.

Yale & Towne Mfg. Co., 9 Murray St.,

New York.

**Plates, Fellow—**

Avery Stamping Co., Cleveland, O.

Bettcher Mfg. Co., Cleveland, O.

John R. Keim Mills, Inc., Buffalo, N. Y.

McKinney Mfg. Co., Allegheny, Pa.

J. H. Sessions & Son, Bristol, Ct.

Upson Nut Co., Cleveland, O.

Walter W. Woodruff & Sons Co., Mount  
Carmel, Ct.

Wrought Washer Mfg. Co., Milwaukee,  
Wis.

Youngstown Iron & Steel Roofing Co.,  
Youngstown, O.

**Plates, Filter Press Perforated—**

Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 224

N. Union St., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.

Manhattan Perforated Metal Co., 237  
Centre St., New York.

Chas. Mundt & Sons, 441 Pearl St., N. Y.

**Plates, Fire Box—**

Otis Steel Co., Ltd., Cleveland, O.

**Plates, Fish—**

Pittsburgh Forge & Iron Co., Pittsburgh,  
Republic Iron & Steel Co., Pittsburgh, Pa.

**Plates, Floor and Ceiling—**  
Beaton & Bradley Co., New Britain, Ct.

Belmont Iron Works, Inc., Philadelphia.  
Bethlehem Foundry & Machine Co.,

South Bethlehem, Pa.

Ireland & Matthews Mfg. Co., Detroit,  
Mich.

Keystone Steel Co., Wilmington, Del.  
Moorhead Bros. & Co., Inc., Pittsburgh,

Pa.

National Tube Co., Pittsburgh, Pa.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Alan Wood Iron & Steel Co., 519 Arch  
St., Philadelphia, Pa.

Worcester Pressed Steel Co., Worcester,  
Mass.

**Plates for Rheostats—**

Chas. Mundt & Sons, 441 Pearl St., N. Y.

**Plates for Welding Iron**  
**and Steel—**

Davis-Bourneville Co., 90 West St., N.Y.  
F. R. Phillips & Sons Co., Pennsylvania

Bldg., Philadelphia, Pa.

**Plates, Gusset, Steel—**

Avery Stamping Co., Cleveland, O.

**Plates, Hand Hole—**

Indianapolis Drop Forging Co., Indian-  
apolis, Ind.

**Plates, Heel and Sole—**

Heath Foundry & Mfg. Co., Plymouth, O.  
Parker Wire Goods Co., Worcester, Mass.

Lucas Sacks, Newark, N. J.

**Plates, Hinge—**

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Plates, Hook and Expan-**  
**sion—**

Beaton & Bradley Co., New Britain, Ct.

**Plates, Hot, Gas—**

S. M. Howes Co., Boston, Mass.

Richmond Foundry & Mfg. Co., Inc.,  
Richmond, Va.

Schneider & Trenkamp Div., Am. Stove  
Co., Cleveland, O.

Taylor & Boggis Foundry Co., Cleveland.  
**Plates, Iron and Steel—**

American Sheet and Tin Plate Co., Pitts-  
burgh, Pa.

Carnegie Steel Co., Pittsburgh, Pa.

Chrome Steel Works, Chrome, N. J.

Empire Iron & Steel Co., Niles, O.

Follansbee Bros. Co., Pittsburgh, Pa.

Forest City Steel & Iron Co., Cleveland.  
Inland Steel Co., First National Bank

Bldg., Chicago, Ill.

W. N. Kratzer & Co., Pittsburgh, Pa.

Jones & Laughlin Steel Co., Pittsburgh.

La Belle Iron Works, Steubenville, O.

Lackawanna Steel Co., 2 Rector St., N.Y.

Lukens Iron & Steel Co., Coatesville, Pa.

Moorhead Bros. & Co., Inc., Pittsburgh,  
Pa.

Otis Steel Co., Ltd., Cleveland, O.

Thos. Prosser & Son, 26 Platt St., N. Y.

Republic Iron & Steel Co., Pittsburgh, Pa.

Tennessee Coal, Iron & Railroad Co., 71  
Broadway, New York.

Alan Wood Iron & Steel Co., 519 Arch  
St., Philadelphia, Pa.

J. Wood & Bros. Co., Conshohocken, Pa.  
Youngstown Sheet & Tube Co., Youngs-  
town, O.

**MERCHANTS.**

Belmont Iron Works Inc., Philadelphia.  
Bourne-Fuller Co., Cleveland, O.  
Denman & Davis, 85-91 Lafayette St.,  
New York.

Dilworth, Gilbert & Towne, Inc., 35-37  
Wooster St., New York.

Arthur C. Harvey Co., Boston, Mass.  
Cal. Hirsch & Sons Iron & Rail Co., St.  
Louis, Mo.

C. B. Houston & Co., Girard Trust Bldg.,  
Philadelphia, Pa.

Ernest Law & Co., 15th and Market Sts.,  
Philadelphia, Pa.

Henry Lewis & Co., 26 So. 15th St., Phil-  
adelphia, Pa.

Edgar M. Moore & Co., Pittsburgh, Pa.  
Edmund W. Mudge & Co., Pittsburgh,  
Pa.

North Works Illinois Steel Co., Chicago,  
Ill.

Ogden & Wallace, 577 Greenwich St.,  
New York.

Pierson & Co., 29 Broadway, N. Y.  
Horace T. Potts & Co., 316-320 No. 3d St.,  
Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and  
Wayman Sts., Chicago, Ill.

Charles G. Stevens Co., 60 So. Canal  
St., Chicago, Ill.

Wheeler, Mifflin & Co., Philadelphia, Pa.

**Plates, Iron and Steel, Cor-  
rugated—**

Carnegie Steel Co., Pittsburgh, Pa.  
Empire Iron & Steel Co., Niles, O.  
Keystone Steel Co., Wilmington, Del.

**Plates, Iron and Steel,  
Punched—**

Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 224  
N. Union St., Chicago, Ill.

Manhattan Perforated Metal Co., 237  
Centre St., New York.

**Plates, Mending—**

Griffin Mfg. Co., Erie, Pa.

H. E. Hessler Co., Syracuse, N. Y.  
National Mfg. Co., Sterling, Ill.

Richards Mfg. Co., Aurora, Ill.  
Stanley Works, New Britain, Ct.

**Plates, Mirror—**

Turner & Stanton Co., Norwich, Ct.

**Plates, Name—**

American Railway Supply Co., 24 Park  
Place, New York.

Cleveland Galvanizing Works Co., Cleve-  
land, O.

Ingram-Richardson Mfg. Co., Beaver  
Falls, Pa.

Geo. M. Ness, Jr., 61 Fulton St., N. Y.  
Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.

Arthur T. Rutter & Co., 256 Broadway,  
New York.

Schwerdtle Stamp Co., Bridgeport, Ct.  
Taylor & Boggs Foundry Co., Cleveland.  
Turner Brass Works, Sycamore, Ill.

**Plates, Number—**

Eagle Lock Co., Terryville, Ct.

**Plates, Perforated Manga-  
nese Steel—**

Taylor Iron & Steel Co., High Bridge,  
N. J.

Tropenas Steel Co., New Castle, Del.

**Plates, Perforated Metal—**

Erdle Perforating Co., Rochester, N. Y.  
Hendrick Mfg. Co., Carbondale, Pa.

Manhattan Perforated Metal Co., 237  
Centre St., New York.

Chas. Mundt & Sons, 441-447 Pearl St.,  
New York.

Nicetown Plate Washer Co., 1822-1850 W.  
Juniata St., Philadelphia, Pa.

**Plates, Perforated Sifter  
and Screen—**

Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 224  
N. Union St., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.  
Manhattan Perforated Metal Co., 237  
Centre St., New York.

Chas. Mundt & Sons, 441-447 Pearl St.,  
New York.

Taylor Iron & Steel Co., High Bridge,  
N. J.

**Plates, Pipe Hook, Steel—**

Avery Stamping Co., Cleveland, O.

**Plates, Punching Metal—**

Manhattan Perforated Metal Co., 237  
Centre St., New York.

**Plates, Push, Pull and Kick—**

Chicago Spring Butt Co., Chicago, Ill.  
Glen Mfg. Co., Ellwood City, Pa.

Griffin Mfg. Co., Erie, Pa.  
U. T. Hungerford Brass & Copper Co.,  
497-505 Pearl St., New York.

Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.

Shelby Spring Hinge Co., Shelby, O.  
Taylor & Boggs Foundry Co., Cleveland.

Turner Brass Works, Sycamore, Ill.  
Yale & Towne Mfg. Co., 9 Murray St., N. Y.

**Plates, Railroad Joint—**

Lackawanna Steel Co., 2 Rector St., N. Y.

**Plates, Rapping, Mallea-  
ble—**

Cleveland Galvanizing Works Co., Cleve-  
land, O.

**Plates, Rheostat—**

Manhattan Perforated Metal Co., 237  
Centre St., New York.

**Plates, Safe, Burglar  
Proof—**

Chrome Steel Works, Chrome, N. J.  
Tropenas Steel Co., New Castle, Del.

**Plates, Screw—**

Charles H. Besly & Co., 15-21 S. Clinton  
St., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.  
Butterfield & Co., Derby Line, Vt.

S. W. Card Mfg. Co., Mansfield, Mass.  
J. M. Carpenter Tap & Die Co., Paw-  
tucket, R. I.

Champion Blower & Forge Co., Lancas-  
ter, Pa.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Morse Twist Drill & Machine Co., New  
Bedford, Mass.

Pratt & Whitney Co., Hartford, Ct.

E. F. Reece Co., Greenfield, Mass.  
Wells Bros. Co., Greenfield, Mass.  
Wiley & Russell Mfg. Co., Greenfield, Mass.

**Plates, Screw Bicycle—**  
Butterfield & Co., Derby Line, Vt.

**Plates, Screw, Quick Opening—**

Wells Bros. Co., Greenfield, Mass.

**Plates, Ship—**

Otis Steel Co. Ltd., Cleveland, O.

**Plates, Shoe, Base Ball—**

Boston Pressed Metal Co., Worcester, Mass.

(See also Plates, Heel and Sole.)

**Plates, Sketch, Steel—**

Avery Stamping Co., Cleveland, O.

**Plates, Spring, Pressed Steel—**

Union Spring & Mfg. Co., New Kensington, Pa.

**Plates, Steel Blued—**

La Belle Iron Works, Steubenville, O.

Standard Tin Plate Co., Canonsburg, Pa.

**Plates, Steel Tank—**

Moorhead Bros. & Co., Inc., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Plates, Straightening—**

Bancroft & Co., Philadelphia, Pa.

**Plates, Tank—**

Moorhead Bros. & Co., Inc., Pittsburgh, Pa.

Otis Steel Co. Ltd., Cleveland, O.

**Plates, Tie—**

Central Track Supply Co., Springfield, O.  
New Castle Forge & Bolt Co., New Castle, Pa.

Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

**Plates, Tire Setting, Iron—**

R. B. Noyes & Co., Greenfield, Mass.  
Wells Bros. Co., Greenfield, Mass.

**Plates, Valve—**

(See Discs, Valve.)

**Plates, Ventilating—**

(See Iron Work, Builders.)

**Plates, Wagon End Gate—**

Lawrence Bros., Sterling, Ill.

**Plates, Wagon, Tongue and Doubletree—**

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Plates, Wall, Steel—**

W. J. Clark Co., Salem, O.

**Plates, Whiffletree—**

Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

**Plates, Zinc—**

Matthiesen & Hegeler Zinc Co., La Salle, Ill.  
Sandoval Zinc Co., 122 N. Peoria St., Chicago, Ill.

**Platform Scales—**

(See Scales, Platform.)

**Plating Apparatus, Electro Mechanical—**

Hanson & Van Winkle Co., Newark, N.J.  
Zucker & Levett & Loeb Co., 526 W. 25th St., New York.

**Plating Barrels for Small Articles—**

(See Barrels, Plating.)

**Plating, Brass—**

Haven Malleable Castings Co., Cincinnati, O.

Hopson & Chapin Mfg. Co., New London, Ct.

National Cycle Mfg. Co., Bay City, Mich.

Schatz Mfg. Co., Chappaqua, N. Y.

W. & S. Mfg. Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Plating, Copper and Bronze—**

Hopson & Chapin Mfg. Co., New London, Ct.

National Cycle Mfg. Co., Bay City, Mich.

Schatz Mfg. Co., Chappaqua, N. Y.

Turner Brass Works, Sycamore, Ill.

W. & S. Mfg. Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Plating, Electro—**

American Gas Machine Co., Albert Lea, Minn.

Blake & Johnson Co., Waterbury, Ct.  
Haven Malleable Castings Co., Cincinnati, O.

Hopson & Chapin Mfg. Co., New London, Ct.

John B. Keim Mills, Inc., Buffalo, N. Y.

National Cycle Mfg. Co., Bay City, Mich.

Raymond Mfg. Co., Corry, Pa.

Schatz Mfg. Co., Chappaqua, N. Y.

M. I. Smith, Bristol, Ct.

I. S. Spencer's Sons, Guilford, Ct.

Taylor & Boggis Foundry Co., Cleveland, O.

W. & S. Mfg. Co., Worcester, Mass.  
Worcester Pressed Steel Co., Worcester, Mass.

**Plating, Nickel—**

Blake & Johnson Co., Waterbury, Ct.  
S. Cheney & Son, Manlius, N. Y.

Chicago Hardware Foundry Co., North Chicago, Ill.

Clark Novelty Co., Rochester, N. Y.  
Haven Malleable Castings Co., Cincinnati, O.

Hubley Mfg. Co., Lancaster, Pa.  
John B. Keim Mills, Inc., Buffalo, N. Y.

National Cycle Mfg. Co., Bay City, Mich.  
Raymond Mfg. Co., Corry, Pa.

Richmond Foundry & Mfg. Co., Inc., Richmond, Va.

Schatz Mfg. Co., Chappaqua, N. Y.  
I. S. Spencer's Sons, Guilford, Ct.

Turner Brass Works, Sycamore, Ill.  
W. & S. Mfg. Co., Worcester, Mass.

**Plating Supplies, Electro—**

(See Electro Plating Supplies.)

**Platinum—**

Baker & Co., Inc., Newark, N. J.  
J. Bishop & Co., Malvern, Pa.

Elmer & Amend, 205 3d Ave., New York

**Platinum Laboratory Utensils—**

Baker & Co., Inc., Newark, N. J.  
**Platinum Laboratory Ware—**

J. Bishop & Co., Malvern, Pa.

**Platinum Plates—**

Ellwood Irvin Tube Works, Oak Lane Sta., Philadelphia, Pa.

**Platinum Settings and Mountings, Jewelers—**

Baker & Co., Inc., Newark, N. J.

**Platinum Ware—**

(See Ware, Platinum.)

**Pliers, Button—**

Cronk & Carrier Mfg. Co., Elmira, N. Y.

John H. Graham & Co., 113 Chambers St., New York.

Irrington Mfg. Co., Irvington, N. J.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Schuchardt & Schutte, 90 West St., N.Y.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Button's Pattern—**  
C. E. Bonner Mfg. Co., Chrisman, Ill.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Pliers, Chain, Needle and Reamer Nose—**

Irrington Mfg. Co., Irvington, N. J.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Schuchardt & Schutte, 90 West St., N.Y.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Champagne—**  
Schuchardt & Schutte, 90 West St., N.Y.

**Pliers, Combination—**  
Bergman Tool Mfg. Co., Buffalo, N. Y.

Billings & Spencer Co., Hartford, Ct.  
C. E. Bonner Mfg. Co., Chrisman, Ill.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Indianapolis Drop Forging Co., Indianapolis, Ind.

Irrington Mfg. Co., Irvington, N. J.  
Kilborn & Bishop Co., New Haven, Ct.

J. M. King & Co., Waterford, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Richmond Forgings Corporation, Richmond, Va.  
Schuchardt & Schutte, 90 West St., N.Y.

Utica Drop Forge & Tool Co., Utica, N. Y.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Pliers, Curved Nose—**  
Irrington Mfg. Co., Irvington, N. J.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Cutting, End, Side and Diagonal—**

Billings & Spencer Co., Hartford, Ct.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Elmore Tool Mfg. Co., Hartford, Ct.

John H. Graham & Co., 113 Chambers St., New York.

Irrington Mfg. Co., Irvington, N. J.  
Kilborn & Bishop Co., New Haven, Ct.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Schuchardt & Schutte, 90 West St., N.Y.  
Otis A. Smith, Rockfall, Ct.

Utica Drop Forge & Tool Co., Utica, N. Y.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Pliers, Duck Bill—**  
Irrington Mfg. Co., Irvington, N. J.  
Utica Drop Forge & Tool Co., Utica, N. Y.

### **Pliers, Electricians'—**

Billings & Spencer Co., Hartford, Ct.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
John H. Graham & Co., 113 Chambers St., New York.

Irving Mfg. & Tool Co., 157 Chambers St., New York.

Kilborn & Bishop Co., New Haven, Ct.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Schuchardt & Schutte, 90 West St., N.Y.  
Utica Drop Forge & Tool Co., Utica, N. Y.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

### **Pliers, Farmers'—**

Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Irrington Mfg. Co., Irvington, N. J.

Kilborn & Bishop Co., New Haven, Ct.  
Utica Drop Forge & Tool Co., Utica, N. Y.

### **Pliers, Fencing—**

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Irrington Mfg. Co., Irvington, N. J.

Kilborn & Bishop Co., New Haven, Ct.  
Utica Drop Forge & Tool Co., Utica, N. Y.

### **Pliers, Flat and Round Nose—**

Billings & Spencer Co., Hartford, Ct.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Columbia Grey Iron Co., Columbia, Pa.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.

Irving Mfg. & Tool Co., 157 Chambers St., New York.

Irrington Mfg. Co., Irvington, N. J.  
Kilborn & Bishop Co., New Haven, Ct.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Schuchardt & Schutte, 90 West St., N.Y.  
Utica Drop Forge & Tool Co., Utica, N. Y.

Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

Wrightsville Hardware Co., Wrightsville, Pa.

### **Pliers, Gas Burner and Pipe—**

Arcade Mfg. Co., Freeport, Ill.  
Billings & Spencer Co., Hartford, Ct.

C. E. Bonner Mfg. Co., Chrisman, Ill.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Columbia Grey Iron Co., Columbia, Pa.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.

Elmore Tool Mfg. Co., Hartford, Ct.  
Indianapolis Drop Forging Co., Indianapolis, Ind.

Irving Mfg. & Tool Co., 157 Chambers St., New York.

Irrington Mfg. Co., Irvington, N. J.  
Kilborn & Bishop Co., New Haven, Ct.

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Schuchardt & Schutte, 90 West St., N.Y.

Smith & Egge Mfg. Co., Bridgeport, Ct.

Utica Drop Forge & Tool Co., Utica, N. Y.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Pliers, Glass—**  
Schuchardt & Schutte, 90 West St., N.Y.

**Pliers, Insulated—**  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Irvington Mfg. Co., Irvington, N. J.

**Pliers, Jewelers'—**  
Irvington Mfg. Co., Irvington, N. J.  
Schuchardt & Schutte, 90 West St., N.Y.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Knot Tying and Splicing—**  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Irvington Mfg. Co., Irvington, N. J.  
Kilborn & Bishop Co., New Haven, Ct.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Lineman's—**  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
John H. Graham & Co., 113 Chambers St., New York.

Irving Mfg. & Tool Co., 157 Chambers St., New York.

Irvington Mfg. Co., Irvington, N. J.  
Kilborn & Bishop Co., New Haven, Ct.  
Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

Schuchardt & Schutte, 90 West St., N.Y.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Milliners'—**  
Irvington Mfg. Co., Irvington, N. J.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Pliers, Opticians'—**  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Piano Makers'—**  
Irvington Mfg. Co., Irvington, N. J.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Tire Plugging—**  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Weavers'—**  
Schuchardt & Schutte, 90 West St., N.Y.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Pliers, Wire Cutting—**  
Irving Mfg. & Tool Co., 157 Chambers St., New York.

**Plow Bolts, Castings, &c.—**  
(See Bolts, Castings, &c.)

**Plow Shares—**  
Bancroft & Co., Philadelphia, Pa.

**Plow Slabs and Bars for Agricultural Manufacturers—**

Jones & Laughlin Steel Co., Pittsburgh, Pa.

**Plows—**  
Keystone Farm Machine Co., York, Pa.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.

Long & Allstatter Co., Hamilton, O.  
Lynchburg Foundry Co., Lynchburg, Va.

Syracuse Chilled Plow Co., Syracuse, N. Y.

R. W. Whitehurst Co., Norfolk, Va.

**Plows, Hand and Wheel—**  
Bateman Mfg. Co., Grenloch, N. J.

**Plows, Ice—**  
(See Ice Harvesting Tools.)

**Plug Gauges—**  
(See Gauges, Plug and Ring.)

**Plugs, Boiler Flue—**  
National-Acme Mfg. Co., Cleveland, O.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

Walworth Mfg. Co., Boston, Mass.

**Plugs, Fusible—**  
Ashcroft Mfg. Co., 85-89 Liberty St., N.Y.

Crosby Steam Gage & Valve Co., Boston.

Lunkensheimer Co., Cincinnati, O.

Walworth Mfg. Co., Boston, Mass.

**Plugs, Gun—**  
W. R. Hartigan, Collinsville, Ct.

**Plugs, Spark—**  
Grant Mfg. & Machine Co., Bridgeport, Ct.

Hartford Machine Screw Co., Hartford, Ct.

**Plumb Bobs—**  
(See Bobs, Plumb.)

**Plumbago Electrophying—**  
(See Electrophying, Plumbago.)

**Plumbago, Electrotyping—**  
(See Electrotyping, Plumbago.)

**Plumbago Shapers—**  
(See Shapes, Plumbago.)

**Plumbers' Bending Springs—**  
(See Benders, Pipe, Wire.)

**Plumbers' Brass Goods—**  
(See Cocks, Brass.)

**Plumbers' Furnaces, Levels, &c.—**  
(See Furnaces, Levels, &c.)

**Plumbing Supplies (Boiler Stands, Legs and Lavatory Fittings, Brackets, Closet Pulls, Pipe Straps, &c.)—**

Barnes Mfg. Co., Mansfield, O.

Central Foundry Co., 137 Wall St., N. Y.

Columbia Grey Iron Co., Columbia, Pa.

Griffin Mfg. Co., Erie, Pa.

Humphries Mfg. Co., Mansfield, O.

Ireland & Matthews Mfg. Co., Detroit, Mich.

Lalanc & Grosjean Mfg. Co., 299 Broadway, New York.

H. A. Matthews Mfg. Co., Seymour, Ct.

Chas. Millar & Son Co., Utica, N. Y.

Smith & Egge Mfg. Co., Bridgeport, Ct.

Turner Brass Works, Sycamore, Ill.

(See also Gaskets and Rings.)

**Plumbing Supplies, Rubber (Plungers, Basin Plugs, Fuller Balls, &c.)—**

H. O. Canfield Co., Bridgeport, Ct.

**Plumbs and Levels—**  
Baker, McMillen Co., Akron, O.

Chapin-Stephens Co., Pine Meadow, Ct.

Henry Disston & Sons, Philadelphia, Pa.

Goodell-Pratt Co., Greenfield, Mass.

Millers Falls Co., 28 Warren St., N. Y.

National Saw Co., Newark, N. J.

Stanley Rule & Level Co., New Britain, Ct.



**Plumbs, Paperhangers'—**  
Webster & Perks Tool Co., Springfield, O.

**Plunger Rubbers—**  
(See Plumbing Supplies.)

**Plungers, Boat—**  
(See Valves and Plungers.)

**Plungers, Pump—**  
Piqua Handle & Mfg. Co., Piqua, O.

**Pneumatic Hammers, &c.—**  
(See Hammers, &c.)

**Pneumatic Motors—**  
(See Motors, Compressed Air.)

**Pneumatic Rivet Hold-On—**  
(See Rivet Hold-Ons, Pneumatic.)

**Pneumatic Tools—**  
(See Compressed Air Tools.)

**Pocket Knives—**  
(See Cutlery Pocket.)

**Pocket Wrenches—**  
(See Wrenches, Bicycle and Pocket.)

**Pockets, Coal Handling—**  
C. W. Hunt Co., West New Brighton, N. Y.

Interstate Engineering Co., Bedford, O.

Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Philadelphia, Pa.

Webster Mfg. Co., 1075 W. 15th St., Chicago, Ill.

Williams, White & Co., Inc., Moline, Ill.

**Pod Bits—** (See Bits, Pod.)

**Pointers, Bolt—**  
Asa S. Cook Co., Hartford, Ct.

National Machinery Co., Tiffin, O.

Webster & Perks Tool Co., Springfield, O.

**Pointers, Pencil—**  
Goodell Co., Antrim, N. H.

**Pointers, Picket—**  
(See Picket Pointers.)

**Pointers, Spoke—**  
Millers Falls Co., 28 Warren St., N. Y.

James Swan Co., Seymour, Ct.

**Pointing Machines, Bolt—**  
Acme Machinery Co., Cleveland, O.

**Pointing Machines, Pin—**  
Baird Machine Co., Oakville, Ct.

E. J. Manville Machine Co., Waterbury, Ct.

**Pointing Machines, Rod and Tube—**  
Excelsior Needle Co., Torrington, Ct.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Pointing Machines, Wire—**  
Baird Machine Co., Oakville, Ct.

Excelsior Needle Co., Torrington, Ct.

E. J. Manville Machine Co., Waterbury, Ct.

Morgan Construction Co., Worcester, Mass.

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

Wright Wire Co., Worcester, Mass.

**Pointing Wire—**  
(See Wire Pointing.)

**Points, Ball, Divider—**  
L. S. Starrett Co., Athol, Mass.

**Points, Carbon and Diamond—**  
Est. of John Dickinson, 64 Nassau St., New York.

Thos. L. Dickinson, 45 Vesey St., N. Y.

**Points, Contact, Platinum—**  
J. Bishop & Co., Malvern, Pa.

**Points, Diamond Graduating—**  
N. E. Dickinson, 47 Maiden Lane, N. Y.

Thos. L. Dickinson, 64 Nassau St., N. Y.

**Points, Diamond Turning—**  
N. E. Dickinson, 47 Maiden Lane, N. Y.

Thos. L. Dickinson, 64 Nassau St., N. Y.

**Points, Glaziers, &c.—**  
Grand Crossing Tack Co., Grand Crossing, Ill.

Shelton Co., Shelton, Ct.

**Points, Picture and Veneer—**  
Tower Mfg. Co., Cincinnati, O.

**Points, Sparking, for Internal Combination Engines—**

Baker & Co., Inc., Newark, N. J.

J. Bishop & Co., Malvern, Pa.

**Points, Stone Cutters'—**  
Hubbard & Co., Pittsburgh, Pa.

**Points, Tailors'—**  
(See Shears, Tailors'.)

**Points, Trammel—**  
(See Trammels and Trammel Points.)

**Points, Well—**  
(See Well Supplies and Tools.)

**Poker Handles—**  
(See Handles, Stove Door, Poker, &c.)

**Pokers, Furnace—**  
S. M. Howes Co., Boston, Mass.

**Pokers, Stove—**  
Arcade Mfg. Co., Freeport, Ill.

Dover Stamping & Mfg. Co., Cambridge, Mass.

Ireland & Matthews Mfg. Co., Detroit, Mich.

Morgan Spring Co., Worcester, Mass.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Wire Goods Co., Worcester, Mass.

(See also Shovels, Tongs, Pokers, Fire Sets.)

**Pole Adjusters, Steps, Tips—**  
(See Adjusters, Steps, Tips.)

**Pole Line Material—**  
(See Telegraph and Telephone Goods, Pole Line Equipment, Pole Supplies.)

**Pole Steps—**  
(See Telegraph and Telephone Supplies.)

**Pole Supports—**  
(See Jennies, Electric Pole Support.)

**Poles, Clothes Line—**  
Malin & Co., Cleveland, O.

Nimmo Fence & Wire Works Co., Norwood, O.

**Poles, Iron Flag—**  
National Tube Co., Pittsburgh, Pa.

**Poles, Pike—**  
Peter Gerlach Co., Cleveland, O.

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

**Poles, Trolley—**  
Allegheny Forging Co., Pittsburgh, Pa.

National Tube Co., Pittsburgh, Pa.

R. D. Nuttall Co., Pittsburgh, Pa.

**Poles, Window Pull Down—**  
David Lupton's Sons Co., Westmoreland

and Janney Sts., Philadelphia, Pa.

Piqua Handle & Mfg. Co., Piqua, O.

**Police Supplies—**  
(See Police Goods.)

**Polish, Floor—**  
Carpenter-Morton Co., Boston, Mass.

**Polish, Furniture—**  
Carpenter-Morton Co., Boston, Mass.

Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Polish, Metal—**  
Geo. W. Hoffman, Indianapolis, Ind.

**Polish, Stove—**  
Joseph Dixon Crucible Co., Jersey City.

**Polishers, Knife—**  
Royal Mfg. Co., Lancaster, Pa.

**Polishing and Buffing Supplies—**

Hanson & Van Winkle Co., Newark, N. J.  
Sterling Emery Wheel Co., Tiffin, O.  
Zucker & Levett & Loeb Co., 526-530 West 25th St., New York.

**Polishing and Lacquering—**  
Schatz Mfg. Co., Chappaqua, N. Y.  
W. & S. Mfg. Co., Worcester, Mass.

**Polishing Belts, Heads, Wheels—**

(See Belts, Heads, Wheels.)

**Polishing Machines—**  
(See Buffing and Polishing Machines.)

**Polishing Machines, Flat Surface—**

Charles H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.

Blake & Johnson Co., Waterbury, Ct.

**Polishing Machines, Glass—**  
Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

**Polishing Machines, Marble and Stone—**

Charles H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.

Ingersoll-Rand Co., 11 Broadway, New York.

F. R. Patch Mfg. Co., Rutland, Vt.

**Polishing Machines, Portable, Wood and Metal—**

Charles H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

**Polo Balls—**  
(See Balls, Bowling and Polo.)

**Poppers, Corn—**  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Delphos Mfg. Co., Delphos, O.

Kilbourne Mfg. Co., Troy, N. Y.

Fred J. Meyers Mfg. Co., Hamilton, O.

Parker Wire Goods Co., Worcester, Mass.

Wickwire Bros., Cortlandt, N. Y.

Wire Goods Co., Worcester, Mass.

**Poppers, Corn, Electric—**  
General Electric Co., Schenectady, N. Y.

**Poppers—**

Western Foundry & Sash Weight Co., 2d and Miller Sts., St. Louis, Mo.

**Porch Supports—**  
(See Supports, Porch.)

**Portable Boring Machines, Drills, Furnaces, &c.—**

(See Boring Machines, Drilling, Furnaces, &c.)

**Portable Pneumatic Grinders—**

(See Grinders, Portable, Pneumatic.)

**Portables, Electric—**  
Goodwin & Kintz Co., Winsted, Ct.

**Portables, Gas—**  
Goodwin & Kintz Co., Winsted, Ct.

**Porticoes, Ornamental—**  
(See Iron Work, Builders'.)

**Post Bases, Fence—**  
(See Caps and Bases.)

**Post Hole Diggers—**  
(See Diggers.)

**Post Office Equipment—**  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Post Tops, Fence—**  
Anchor Post Iron Works, 27 Cortlandt St., New York.

De Kalb Fence Co., De Kalb, Ill.

**Post Tops, Hitching—**  
Anchor Post Iron Works, 27 Cortlandt St., New York.

**Postal Scales—**  
(See Scales, Postal.)

**Posts, Bicycle Saddle—**  
John R. Keim Mills, Inc., Buffalo, N. Y.

**Posts, Clothes—**  
Anchor Post Iron Works, 27 Cortlandt St., New York.

**Posts, Drilling—**  
Keystone Mfg. Co., Buffalo, N. Y.

**Posts, Fence—**  
Anchor Post Iron Works, 27 Cortlandt St., New York.

Avery Stamping Co., Cleveland, O.

De Kalb Fence Co., De Kalb, Ill.

Enterprise Foundry & Fence Co., Indianapolis, Ind.

Ludlow-Baylor Wire Co., St. Louis, Mo.

Fred J. Meyers Mfg. Co., Hamilton, O.

National Tube Co., Pittsburgh, Pa.

Wright Wire Co., Worcester, Mass.

**Posts, Hitching—**  
Anchor Post Iron Works, 27 Cortlandt St., New York.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

S. Cheney & Son, Manlius, N. Y.

Covert Mfg. Co., Troy, N. Y.

Cyclone Fence Co., Waukegan, Ill.

Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Enterprise Foundry & Fence Co., Indianapolis, Ind.

Glen Mfg. Co., Ellwood City, Pa.

Hayes Pump & Planter Co., Galva, Ill.

Ingram-Richardson Mfg. Co., Beaver Falls, Pa.

Ludlow-Baylor Wire Co., St. Louis, Mo.

Mast, Foss & Co., Springfield, O.

Fred J. Meyers Mfg. Co., Hamilton, O.

National Iron & Wire Co., Cleveland, O.

Nimmo Fence & Wire Works Co., Norwood, O.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

Stewart Iron Works Co., Cincinnati, O.

Van Dorn Iron Works Co., Cleveland, O.

Ward Fence Co., Decatur, Ind.

**Posts, Lamp—**  
Belmont Iron Works, Inc., Philadelphia.

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.

Stewart Iron Works Co., Cincinnati, O.

R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Posts, Lathe Tool—**  
Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

O. K. Tool Holder Co., Shelton, Ct.

**Posts, Mooring—**  
Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

**Posts, Sign—**  
Anchor Post Iron Works, 27 Cortlandt St., New York.

Ingram-Richardson Mfg. Co., Beaver Falls, Pa.

**Pot Chains—**  
(See Kitchen Articles, Wire.)

**Pot Covers—**  
(See Covers, Pot.)

**Potato and Apple Parers—**  
(See Parers, Apple and Potato.)

**Potato Cutters, Hooks,**

**Mashers—**  
(See Cutters, Hooks, Mashers.)

**Potato Diggers, Planters—**  
(See Diggers, Planters, Potato.)

**Potato Machinery—**

Bateman Mfg. Co., Grenloch, N. J.

**Potato Mashers, Wire—**

(See Kitchen Articles, Wire.)

**Pots, Annealing, for Wire—**  
Mechan. Boiler & Construction Co., Lowellville, O.

Morgan Construction Co., Worcester, Mass.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Pots, Asphalt and Mastic—**  
(See Heaters, Asphalt and Mastic.)

**Pots, Coffee—**

Dover Stamping & Mfg. Co., Cambridge, Mass.

Gem Mfg. Co., Boston, Mass.

**Pots, Chocolate, Tea, Coffee, &c., Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Pots, Galvanizing—**

American Welding Co., Carbondale, Pa.

Meehan Boiler & Construction Co., Lowellville, O.

Petroleum Iron Works Co., Sharon, Pa.

**Pots, Glue—**

Advance Machinery Co., Toledo, O.

Stuart & Peterson Co., Burlington, N. J.

**Pots, Melting—**

Byram & Co., Detroit, Mich.

Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

Stuart & Peterson Co., Burlington, N. J.

**Pots, Mfg.—**

Meehan Boiler & Construction Co., Lowellville, O.

Pennsylvania Engineering Works, New Castle, Pa.

**Pots, Solder—**

Schneider & Trenkamp Co., Div., American Stove Co., Cleveland, O.

**Pots, Steel Melting—**

W. J. Clark Co., Salem, O.

**Pots, Stove—**

Avery Stamping Co., Cleveland, O.

**Pots, Tallow—**

American Tube & Stamping Co., Bridgeport, Ct.

Gem Mfg. Co., Pittsburgh, Pa.

Johnson Mfg. Co., Urbana, O.

**Pots, Tea—**

Dover Stamping & Mfg. Co., Cambridge, Mass.

**Pots, Teeming—**

McCullough-Dalzell Crucible Co., Pittsburgh, Pa.

**Pots, Tinning—**

F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

**Pottery Machinery—**

Wellman-Seaver-Morgan Co., Cleveland, O.

**Poultry Netting—**

(See Netting, Wire.)

**Pounders, Steak—**

Arcade Mfg. Co., Freeport, Ill.

Columbia Grey Iron Co., Columbia, Pa.

Launders, Frary & Clark, New Britain, Ct.

Lasher Mfg. Co., Davenport, Ia.

Parker Wire Goods Co., Worcester, Mass.

**Powder Keg Material—**

Empire Iron & Steel Co., Niles, O.

J. Wood & Bros. Co., Conabohocken, Pa.

**Powder Mill Machinery—**

Phosphor Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Powder, Oil Stone—**

Pike Mfg. Co., Pike, N. H.

**Powder, Putty—**

Pike Mfg. Co., Pike, N. H.

**Powder, Tale—**

D. C. Adams, St. Louis, Mo.

**Power Hammers—**

(See Hammers, Power.)

**Power Transmission, Elec-**

**tric—** General Electric Co., Schenectady, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Power Transmission Ma-**

**chinery—**

Bancroft & Co., Philadelphia, Pa.

Birmingham Iron Foundry, Derby, Ct.

Broderick & Bascom Rope Co., St. Louis, H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. E. Caldwell Co., Louisville, Ky.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Dodge Mfg. Co., Mishawaka, Ind.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Farrel Fdy. & Mach. Co., Ansonia, Ct.

Fawcus Machine Co., Pittsburgh, Pa.

Humphrey Machine Co., Keene, N. H.

Jeffrey Mfg. Co., Columbus, O.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Lane Mfg. Co., Montpelier, Vt.

A. Leschen & Sons Rope Co., St. Louis.

Link-Belt Co., Philadelphia, Pa.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Engineering Co., Alliance, O.

Morse Chain Co., Ithaca, N. Y.

Poole Engineering & Machine Co., Baltimore, Md.

Reeves Pulley Co., Columbus Ind.

Royersford Foundry & Machine Co., Royersford, Pa.

Saginaw Mfg. Co., Saginaw, Mich.

A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.

Standard Clutch Mfg. Co., Sidney, O.

Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

T. B. Wood's Sons Co., Chambersburg, Pa.

**MERCHANTS.**

Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.

**Power Transmission, Va-**

**riable Speed—**

Variable Speed Clutch Co., Milwaukee, Wis.

**Power Transmission, Vertical Shaft—**

Dodge Mfg. Co., Mishawaka, Ind.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.  
T. B. Wood's Sons Co., Chambersburg, Pa.

**Powers, Foot—**  
Goodell-Pratt Co., Greenfield, Mass.

**Powers, Horse—**  
W. & B. Douglas, Middletown, Ct.  
S. Freeman & Sons Mfg. Co., Racine, Wis.

Goulds Mfg. Co., Seneca Falls, N. Y.  
Hayes Pump & Planter Co., Galva, Ill.

**Preservatives, Wood—**  
Samuel Cabot, Inc., Boston, Mass.

**Press Bar Machines—**  
Morse Twist Drill & Machine Co., New Bedford, Mass.

**Press Work—**  
(See Stamping, Sheet Metal Work.)

**Pressed Steel Products—**  
(See Shapes, Pressed Steel.)

**Presses, Arbor—**  
Fox Machine Co., Grand Rapids, Mich.  
Lucas Machine Tool Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Presses, Baling, Paper, Rag, Waste, &c.—**

Charles F. Elmes Engineering Works, 253 Fulton St., Chicago, Ill.  
Humphrey Machine Co., Keene, N. H.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.  
Watson-Stillman Co., 50 Church St., N. Y.  
R. W. Whitehurst & Co., Norfolk, Va.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Presses, Branching—**  
Adriance Machine Works, Brooklyn, N. Y.  
Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
John T. Burr & Sons, Brooklyn, N. Y.  
Consolidated Press & Tool Co., Hastings, Mich.

Ferracute Machine Co., Bridgeton, N. J.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
Lapoint Machine Tool Co., Hudson, Mass.  
Chas. Leffler & Co., Brooklyn, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Schnuchardt & Schutte, 90 West St., N. Y.  
V. & O. Press Co., Brooklyn, N. Y.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
Watson-Stillman Co., 50 Church St., N. Y.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

Zeh & Hahnemann Co., Newark, N. J.  
**Presses, Cabbaging, Metal—**  
Charles F. Elmes Engineering Works, 253 Fulton St., Chicago, Ill.

**Presses, Car Seal—**  
(See Presses, Seal, Lead.)

**Presses, Ceiling—**  
Adriance Machine Works, Brooklyn, N. Y.  
E. W. Bliss Co., Brooklyn, N. Y.  
Ferracute Machine Co., Bridgeton, N. J.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
George A. Ohl & Co., Newark, N. J.

V. & O. Press Co., Brooklyn, N. Y.  
Zeh & Hahnemann Co., Newark, N. J.

**Presses, Cider—**  
(See Mills, Cider.)

**Presses, Clay, Tuyere and Nozzle—**  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Presses, Coining—**  
(See Coining Machinery.)

**Presses, Cornice—**  
Adriance Machine Works, Brooklyn, N. Y.  
Ferracute Machine Co., Bridgeton, N. J.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
George A. Ohl & Co., Newark, N. J.  
Zeh & Hahnemann Co., Newark, N. J.

**Presses, Cotton—**  
R. W. Whitehurst & Co., Norfolk, Va.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Presses, Crank Pin—**  
E. W. Bliss Co., Brooklyn, N. Y.  
Richard Dudgeon, 24-26 Columbia St., New York.

Charles F. Elmes Engineering Co., 253-259 Fulton St., Chicago, Ill.  
Watson-Stillman Co., 50 Church St., N. Y.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Presses, Dial Feed—**  
Baird Machine Co., Oakville, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.

**Presses, Drain, Tile—**  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Presses, Drop—**  
(See Hammers, Drop.)

**Presses, Electrotyp—**  
Watson-Stillman Co., 50 Church St., N. Y.

**Presses, Envelope—**  
R. E. Kidder, Worcester, Mass.

**Presses, Filter—**  
Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.

**Presses, Foot—**  
Niles-Bement-Pond Co., 111 B'way, N. Y.

Adriance Machine Works, Brooklyn, N. Y.  
Baird Machine Co., Oakville, Ct.  
Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Consolidated Press & Tool Co., Hastings, Mich.

Ferracute Machine Co., Bridgeton, N. J.  
Garvin Machine Co., Spring and Varick Sts., New York.

Gould & Eberhardt, Newark, N. J.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
Chas. Leffler & Co., Brooklyn, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

E. J. Manville Machine Co., Waterbury, Ct.  
Niagara Machine & Tool Works, Buffalo, N. Y.

Niles-Bement-Pond Co., 111 B'way, N. Y.  
George A. Ohl & Co., Newark, N. J.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

F. B. Shuster Co., New Haven, Ct.  
Fred J. Swaine Co., St. Louis, Mo.  
Taylor & Fenn Co., Hartford, Ct.  
V. & O. Press Co., Brooklyn, N. Y.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Presses, Forging—**

Lucas Machine Tool Co., Cleveland, O.

**Presses, Forging—**

Adriance Machine Works, Brooklyn, N. Y.

Alliance Machine Co., Alliance, O.

Beaudry &amp; Co., Boston, Mass.

Blake &amp; Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Consolidated Press &amp; Tool Co., Hastings, Mich.

Ferracute Machine Co., Bridgeton, N. J.

A. Garrison Foundry Co., Pittsburgh, Pa.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Chas. Leffer &amp; Co., Brooklyn, N. Y.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.

Niagara Machine &amp; Tool Works, Buffalo, N. Y.

Niles-Bement-Pond Co., 111 Broadway, New York.

V. &amp; O. Press Co., Brooklyn, N. Y.

Watson-Stillman Co., 50 Church St., N.Y.

R. D. Wood &amp; Co., 400 Chestnut St., Philadelphia, Pa.

Zeh &amp; Hahnemann Co., Newark, N. J.

**Presses, Fruit, Meat and Vegetable—**

Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

Erie Specialty Co., Erie, Pa.

Landers, Frary &amp; Clark, New Britain, Ct.

R. W. Whitehurst &amp; Co., Norfolk, Va.

Wrightsville Hardware Co., Wrightsville, Pa.

**Presses, Gang Tool—**

Blake &amp; Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Cincinnati Punch &amp; Shear Co., Cincinnati, O.

Ferracute Machine Co., Bridgeton, N. J.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

V. &amp; O. Press Co., Brooklyn, N. Y.

Waterbury Farrel Foundry &amp; Machine Co., Waterbury, Ct.

Zeh &amp; Hahnemann Co., Newark, N. J.

**Presses, Glue—**

Advance Machinery Co., Toledo, O.

**Presses, Hand—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

Charles F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.

Niagara Machine &amp; Tool Works, Buffalo, N. Y.

V. &amp; O. Press Co., Brooklyn, N. Y.

**Presses, Hand and Power—**

George A. Ohl &amp; Co., Newark, N. J.

Fock, Stow &amp; Wilcox Co., 27 Murray St., New York.

**Presses, Hay—**

R. W. Whitehurst Co., Norfolk, Va.

**Presses, Heavy Flanging—**

Adriance Machine Works, Brooklyn, N. Y.

Alliance Machine Co., Alliance, O.

E. W. Bliss Co., Brooklyn, N. Y.

Consolidated Press &amp; Tool Co., Hastings, Mich.

Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.

Ferracute Machine Co., Bridgeton, N. J.

A. Garrison Foundry Co., Pittsburgh, Pa.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Long &amp; Allstatter Co., Hamilton, O.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.

Niagara Machine &amp; Tool Works, Buffalo, N. Y.

Niles-Bement-Pond Co., 111 Broadway, New York.

Fred J. Swaine Co., St. Louis, Mo.

Watson-Stillman Co., 50 Church St., N.Y.

Wickes Bros., Saginaw, Mich.

Zeh &amp; Hahnemann Co., Newark, N. J.

**Presses, Heavy Hydraulic Bending—**

Alliance Machine Co., Alliance, O.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

R. D. Wood &amp; Co., 400 Chestnut St., Philadelphia, Pa.

**Presses, Hydraulic—**

Alliance Machine Co., Alliance, O.

Bethlehem Foundry &amp; Machine Co., So. Bethlehem, Pa.

Bethlehem Steel Co., So. Bethlehem, Pa.

Birmingham Iron Foundry, Derby, Ct.

Chambersburg Engineering Co., Chambersburg, Pa.

Richard Dudgeon, 24-26 Columbia St., New York.

Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.

Farrel Foundry &amp; Mach. Co., Ansonia, Ct.

A. Garrison Foundry Co., Pittsburgh, Pa.

Mackintosh, Hemphill &amp; Co., Pittsburgh, Pa.

John H. McGowan Co., Cincinnati, O.

Manning, Maxwell &amp; Moore, Inc., 85 Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

Pacific Iron Works, Bridgeport, Ct.

Waterbury Farrel Foundry &amp; Machine Co., Waterbury, Ct.

Watson-Stillman Co., 50 Church St., N.Y.

Wickes Bros., Saginaw, Mich.

Williams, White &amp; Co., Moline, Ill.

R. D. Wood &amp; Co., 400 Chestnut St., Philadelphia, Pa.

**Presses, Hydraulic Belting—**

Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.

Farrel Foundry &amp; Machine Co., Ansonia, Ct.

Watson-Stillman Co., 50 Church St., N.Y.

**Presses, Hydraulic Bending—**

Chambersburg Engineering Co., Chambersburg, Pa.

**Presses, Hydraulic Flanging—**

Chambersburg Engineering Co., Chambersburg, Pa.

**Presses, Hydraulic Forging—**

Chambersburg Engineering Co., Chambersburg, Pa.

R. D. Wood &amp; Co., 400 Chestnut St., Philadelphia, Pa.

**Presses, Hydraulic Forging—**

Chambersburg Engineering Co., Chambersburg, Pa.

**Presses, Hydraulic Oil—**

Charles F. Elmes Engineering Works, 253  
259 Fulton St., Chicago, Ill.  
Watson-Stillman Co., 50 Church St., N.Y.

**Presses, Hydraulic Portable—**

Charles F. Elmes Engineering Works, 253-  
259 Fulton St., Chicago, Ill.  
Vulcan Iron Works, 28 No. Irving Ave.,  
Chicago, Ill.  
Watson-Stillman Co., 50 Church St., N.Y.  
R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Presses, Hydraulic Wheel—**

Alliance Machine Co., Alliance, O.  
Chambersburg Engineering Co., Chambers-  
burg, Pa.  
Richard Dudgeon, 24 Columbia St., N. Y.  
Chas. F. Elmes Engineering Works, 253-  
259 Fulton St., Chicago, Ill.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Watson-Stillman Co., 50 Church St., N.Y.  
R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Presses, Hydro-Pneumatic—**

Stow Flexible Shaft Co., 26th & Callow-  
hill Sts., Philadelphia, Pa.

**Presses, Lard and Tallow—**

Enterprise Mfg. Co. of Pa., Philadelphia,  
Pa.

Landers, Frary & Clark, New Britain, Ct.  
Silver Mfg. Co., Salem, O.

Wrightsville Hardware Co., Wrightsville,  
Pa.

**Presses, Lead—**

Charles F. Elmes Engineering Works, 253-  
259 Fulton St., Chicago, Ill.

John H. McGowan Co., Cincinnati, O.  
Thomas Prosser & Son, 26 Platt St., N. Y.

Watson-Stillman Co., 50 Church St., N.Y.  
R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Presses, Leather Emboss-  
ing—**

George A. Ohl & Co., Newark, N. J.

**Presses, Nut, Hot and Cold—**

National Machinery Co., Tiffin, O.

**Presses, Pad, Harness—**

John H. Best, Galva, Ill.

**Presses, Paper, Carton  
Covers—**

Adriance Machine Works, Brooklyn, N. Y.  
Chas. Leffler & Co., Brooklyn, N. Y.

Zeh & Hahnemann Co., Newark, N. J.

**Presses, Perforating Metal—**

E. W. Bliss Co., Brooklyn, N. Y.

**Presses, Punching and  
Trimming—**

Adriance Machine Works, Brooklyn, N. Y.  
Baird Machine Co., Oakville, Ct.

Bethlehem Foundry & Machine Co.,  
South Bethlehem, Pa.

Billings & Spencer Co., Hartford, Ct.  
Blake & Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.  
Cincinnati Punch & Shear Co., Cincin-  
nati, O.  
James Clark, Jr., Electric Co., Louisville,  
Ky.  
Ferracute Machine Co., Bridgeton, N. J.  
A Garrison Foundry Co., Pittsburgh, Pa.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Hilles & Jones Co., Wilmington, Del.  
Chas. Leffler & Co., Brooklyn, N. Y.

Long & Allstatter Co., Hamilton, O.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

E. J. Manville Machine Co., Waterbury,  
Ct.

Merrill Bros. Maspeth, N. Y.

National Machinery Co., Tiffin, O.

New Doty Mfg. Co., Janesville, Wis.

Niagara Machine & Tool Works, Buffalo,  
N. Y.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Fred J. Swaine Co., St. Louis, Mo.

V. & O. Press Co., Brooklyn, N. Y.

Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

Watson-Stillman Co., 50 Church St., N.Y.

Wickes Bros., Saginaw, Mich.

Wiley & Russell Mfg. Co., Greenfield,  
Mass.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

Zeh & Hahnemann Co., Newark, N. J.

**Presses, Rubber Vulcan-  
izing—**

Birmingham Iron Foundry, Derby, Ct.

Chas. F. Elmes Engineering Works, 253-  
259 Fulton St., Chicago, Ill.

Farrel Foundry & Mach. Co., Ansonia, Ct.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Presses, Screw—**

Adriance Machine Works, Brooklyn, N. Y.

W. F. & John Barnes Co., Rockford, Ill.

Birmingham Iron Foundry, Derby, Ct.

Consolidated Press & Tool Co., Hastings,  
Mich.

Farrel Foundry & Mach. Co., Ansonia, Ct.

Ferracute Machine Co., Bridgeton, N. J.

Gould & Eberhardt, Newark, N. J.

Chas. Leffler & Co., Brooklyn, N. Y.

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Niagara Machine & Tool Works, Buffalo  
N. Y.

Fred J. Swaine Co., St. Louis, Mo.

V. & O. Press Co., Brooklyn, N. Y.

Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

Zeh & Hahnemann Co., Newark, N. J.

**Presses, Seal—**

Horszon & Pettis Mfg. Co., New Haven  
Ct.

Chas. Morrill, 277 Broadway, New York  
Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

**Presses, Seal Lead—**

E. W. Bliss Co., Brooklyn, N. Y.

Theo. Hiertz Metal Co., St. Louis, Mo.

Chas. Morrill, 273 Broadway, New York.

Utica Drop Forge & Tool Co., Utica,  
N. Y.

**Presses, Sheet Metal Work  
ing—**

Adriance Machine Works, Brooklyn, N. Y.

Automatic Machine Co., Bridgeport, Ct.

Baird Machine Co., Oakville, Ct.

Bethlehem Foundry & Machine Co.,  
South Bethlehem, Pa.

Blake & Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Cleveland Stamping & Tool Co., Cleve-  
land, O.

Consolidated Press & Tool Co., Hastings, Mich.  
 Chas. F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.  
 Ferracuta Machine Co., Bridgeton, N. J.  
 Garvin Machine Co., Spring and Varick Sts., New York.  
 A. Garrison Foundry Co., Pittsburgh, Pa.  
 Gould & Eberhardt, Newark, N. J.  
 W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
 Hilles & Jones Co., Wilmington, Del.  
 Chas. Leffer & Co., Brooklyn, N. Y.  
 Long & Allstatter Co., Hamilton, N. Y.  
 Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 E. J. Manville Machine Co., Waterbury, Ct.

Morgan Engineering Co., Alliance, O.  
 Niagara Machine & Tool Works, Buffalo, N. Y.

Niles-Bement-Pond Co., 111 Broadway, New York.

George A. Ohl & Co., Newark, N. J.  
 Richard Mfg. Co., Bloomsburg, Pa.  
 F. B. Shuster Co., New Haven, Ct.  
 Fred J. Swaine Co., St. Louis, Mo.  
 V. & O. Press Co., Brooklyn, N. Y.  
 Waterbury, Farrel Foundry & Machine Co., Waterbury, Ct.  
 Watson-Stillman Co., 50 Church St., N. Y.  
 Wickes Bros., Saginaw, Mich.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.  
 Zeh & Hahnemann Co., Newark, N. J.

#### MERCHANTS.

Baird Machinery Co., Pittsburgh, Pa.  
 W. R. Beatty Machinery & Equipment Co., Pittsburgh, Pa.  
 Hill, Clarke & Co., Boston, Mass.  
 W. C. Johnson & Sons Machinery Co., St. Louis, Mo.  
 J. J. McCabe, 14 Dey St., New York.  
 Marshall & Hushart Machinery Co., 62-64 S. Canal St., Chicago, Ill.  
 Motch & Merryweather Machinery Co., Cleveland, O.  
 Prentiss Tool & Supply Co., 115 Liberty St., New York.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.  
 Frank Toomey, 427-431 N. 3d St., Philadelphia, Pa.  
 Jacob Ullman, Buffalo, N. Y.  
 Vandyck, Churchill Co., 8 Dey St., N. Y.  
 A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

**Presses, Spring Foot**—  
 Taylor & Fenn Co., Hartford, Ct.

**Presses, Steel Plate Engraving, and Printing**—  
 Gould & Eberhardt, Newark, N. J.

**Presses, Sub**—  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Waltham Machine Works, Waltham, Mass.  
 Zeh & Hahnemann Co., Newark, N. J.

**Presses, Tincture**—  
 Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

**Presses, Tire Welding**—  
 Williams, White & Co., Moline, Ill.

**Presses, Tobacco**—  
 S. Spencer's Sons, Guilford, Ct.

**Presses, Vegetable**—  
 Wrightsville Hardware Co., Wrightsville, Pa.

**Presses, Veneer**—  
 Advance Machinery Co., Toledo, O.  
 Fox Machine Co., Grand Rapids, Mich.

**Presses, Wine**—  
 Keystone Farm Machine Co., York, Pa.  
 R. W. Whitehurst Co., Norfolk, Va.

**Presses, Wiring**—  
 Adriance Machine Works, Brooklyn, N. Y.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Ferracuta Machine Co., Bridgeton, N. J.  
 W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
 Fred J. Swaine Co., St. Louis, Mo.  
 V. & O. Press Co., Brooklyn, N. Y.  
 Zeh & Hahnemann Co., Newark, N. J.

**Prick Punches**—  
 (See PUNCHES, Drive.)

**Primer Making Machines**—  
 Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Primers**—  
 Union Metallic Cartridge Co., Bridgeport, Ct.

**Printers and Publishers.**

**Catalogue**—  
 A. Mugford, Hartford, Ct.

**Printers' Rule Brass**—  
 (See BRASS Rule, Printers'.)

**Printing Apparatus**—  
 Keuffel & Esser Co., 127 Fulton St., N. Y.

**Printing Machines, Blue**—  
 (See Blueprint Machines.)

**Printing Machines, Electric Blue**—

Buckeye Engine Co., Salem, O.

**Producers, Gas**—  
 Du Bois Iron Works, Du Bois, Pa.

Duff Patents Co., Pittsburgh, Pa.  
 Forter-Miller Engineering Co., Pittsburgh.  
 Alex. Laughlin & Co., Pittsburgh, Pa.  
 Morgan Construction Co., Worcester, Mass.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.  
 S. R. Smythe Co., Pittsburgh, Pa.  
 Wm. Swindell & Bro., Pittsburgh, Pa.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Profiling Machines**—  
 Becker Milling Machine Co., Hyde Park, Mass.

Garvin Machine Co., Spring and Varick Sts., New York.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Niles-Bement-Pond Co., 111 Broadway, New York.

Praet & Whitney Co., Hartford, Ct.

**Programme Clocks**—  
 (See Clocks, Programme.)

**Projectiles**—  
 Bethlehem Steel Co., So. Bethlehem, Pa.

National Tube Co., Pittsburgh, Pa.

**Prop Block Washers**—  
 (See Washers, Prop Block.)

**Propellers, Bronze**—  
 Thomas Laughlin Co., Portland, Me.

Paul S. Reeves & Son, 1415 Catharine St., Philadelphia, Pa.

**Props, Clothes Line**—  
 (See Poles, Clothes Line.)

**Protectors, Garbage Can**—  
 Wright Wire Co., Worcester, Mass.

**Protectors, Package—**

Cary Mfg. Co., 19-21 Roosevelt St., N. Y.

**Protectors, Set Screw—**

H. O. Canfield Co., Bridgeport, Ct.

**Protectors, Strap—**

Covert Mfg. Co., Troy, N. Y.

**Protractors—**

Brown & Sharpe Mfg. Co., Providence, R. I.

Goodell-Pratt Co., Greenfield, Mass.

Keuffel & Esser Co., 127 Fulton St., N. Y.

L. S. Starrett Co., Athol, Mass.

**Protractors and Triangles—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Pruners, Tree—**

Clauss Shear Co., Fremont, O.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Rhodes Mfg. Co., Grand Rapids, Mich.

Seymour Smith & Son, Oakville, Ct.

**Pruning Saws, Shears—**

(See Saws, Shears.)

**Publishers, Book—**

System, 151-153 Wabash Ave., Chicago, Ill.

David Williams Co., 14-16 Park Place, New York.

**Publishers, Catalogue—**

(See Printers and Publishers, Catalogue.)

**Pug Mills—**

Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.

J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.

**Pull Plates—**

(See Plates, Pull, Push and Kick.)

**Pullers, Cork—**

Arcade Mfg. Co., Freeport, Ill.

Erie Specialty Co., Erie, Pa.

John H. Graham & Co., 113 Chambers St., New York.

Chas. Parker Co., Meriden, Ct.

**Pullers, Nail—**

Belden Machine Co., New Haven, Ct.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Elmore Tool Mfg. Co., Hartford, Ct.

Kilborn & Bishop Co., New Haven, Ct.

Landers, Frary & Clark, New Britain, Ct.

Millers Falls Co., 28 Warren St., N. Y.

Charles Morrill, 277 Broadway, New York.

Page-Storms Drop Forge Co., Chicopee, Mass.

Scranton & Co., New Haven, Ct.

**Pullers, Railroad Spike—**

Hubbard & Co., Pittsburgh, Pa.

Charles Morrill, 277 Broadway, N. Y.

**Pullers, Stake and Pole—**

Chicago Steel Foundry Co., The Rookery, Chicago, Ill.

**Pullers, Staple—**

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Irrington Mfg. Co., Irvington, N. J.

Kilborn & Bishop Co., New Haven, Ct.

Osmundson Spade Mfg. Co., Perry, Ia.

Utica Drop Forge & Tool Co., Utica, N. Y.

**Pullers, Tack—**

Arcade Mfg. Co., Freeport, Ill.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Elmore Tool Mfg. Co., Hartford, Ct.

Benjamin P. Forbes, Cleveland, O.

Kilborn & Bishop Co., New Haven, Ct.

Landers, Frary & Clark, New Britain, Ct.

Scranton & Co., New Haven, Ct.

Whitman & Barnes Mfg. Co., Chicago, Ill.

**Pulley Blocks—**

(See Blocks, Pulley.)

**Pulley Bushings, Turning**

**Lathes, &c.—**

(See Bushings, Lathes, &c.)

**Pulley Hooks, Floor—**

(See Hooks, Floor Pulley.)

**Pulleys, Avining—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Pulleys, Ceiling—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

**Pulleys, Clothes Line—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Wrightsville Hardware Co., Wrightsville, Pa.

**Pulleys, Dumb Waiter—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

J. G. Spidel, Reading, Pa.

**Pulleys, Electric Light—**

Reading Hardware Co., Reading, Pa.

**Pulleys, Friction Clutch—**

American Well Works, Aurora, Ill.

Adriance Machine Works, Brooklyn, N. Y.

E. W. Bliss Co., Brooklyn, N. Y.

Brown & Sharpe Mfg. Co., Providence, R. I.

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. F. Caldwell Co., Louisville, Ky.

Charter Gas Engine Co., Sterling, Ill.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Dodge Mfg. Co., Mishawaka, Ind.

Eastern Machinery Co., New Haven, Ct.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Garvin Machine Co., Spring & Varick Sts., New York.

Hess-Snyder Co., Massillon, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

New Haven Mfg. Co., New Haven, Ct.

Poole Engineering & Machine Co., Baltimore, Md.

Pratt & Whitney Co., Hartford, Ct.

Standard Clutch Mfg. Co., Sidney, O.

T. B. Wood's Sons Co., Chambersburg, Pa.

**Pulleys, Hay Fork and**

**Sling—**

S. Cheney & Son, Manlius, N. Y.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Lawrence Bros., Sterling, Ill.

Louden Machinery Co., Fairfield, Ia.

F. E. Myers & Bro., Ashland, O.

Ney Mfg. Co., Canton, O.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.



Susquehanna Casting Co., Wrightsville, Pa.  
Whitman & Barnes Mfg. Co., Chicago.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Pulleys, Hot House—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.

**Pulleys, Loose—**

Pennsylvania Steel Pulley Co., Pittsburgh, Pa.

**Pulleys, Pressed Steel Shafting—**

American Pulley Co., 29th and Bristol Sts., Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Phillips Pressed Steel Pulley Works, 4th St. and Glenwood Ave., Philadelphia.

**Pulleys, Sash—**

American Pulley Co., 29th and Bristol Sts., Philadelphia, Pa.  
Graff Rapids Hardware Co., Grand Rapids, Mich.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Smith & Egge Mfg. Co., Bridgeport, Ct.  
Susquehanna Casting Co., Wrightsville, Pa.

W. & J. Tiebout, 118 Chambers St., N. Y.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Pulleys, Screw—**

Ney Mfg. Co., Canton, O.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Pulleys, Self Adjustable Shade—**

I. E. Palmer Co., Middletown, Ct.  
**Pulleys, Shade—**  
Turner & Stanton Co., Norwich, Ct.

**Pulleys, Shaft—**

American Tool & Machine Co., Boston.  
H. W. Caldwell & Sons Co., Western Ave. and 17th St., Chicago, Ill.  
W. E. Caldwell Co., Louisville, Ky.  
Charter Gas Engine Co., Sterling, Ill.  
Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.  
Dodge Mfg. Co., Mishawaka, Ind.  
Eastern Machinery Co., New Haven, Ct.  
Hess-Snyder Co., Massillon, O.  
Humphrey Machine Co., Keene, N. H.  
Jones & Laughlin Steel Co., Pittsburgh.  
Pennsylvania Steel Pulley Co., Pittsburgh.  
Phillips Pressed Steel Pulley Works, 4th St. and Glenwood Ave., Philadelphia.  
Poole Engineering & Machine Co., Baltimore, Md.  
Roversford Foundry & Machine Co., Roversford, Pa.  
Saginaw Mfg. Co., Saginaw, Mich.  
Standard Clutch Mfg. Co., Sidney, O.  
Walsh's Sons & Co., Newark, N. J.  
Webster Mfg. Co., 1075-1111 W. 15th St. Chicago, Ill.  
Wickes Bros., Saginaw, Mich.  
T. B. Wood's Sons Co., Chambersburg, Pa.

**Pulleys, Side—**

American Pulley Co., 29th and Bristol Sts., Philadelphia, Pa.  
Thomas Laughlin Co., Portland, Me.  
Ney Mfg. Co., Canton, O.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Pulleys, Split—**

W. E. Caldwell Co., Inc., Louisville, Ky.  
Geo. V. Cresson Co., 18th St. & Allegheny Ave., Philadelphia, Pa.  
Dodge Mfg. Co., Mishawaka, Ind.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.  
Hess-Snyder Co., Massillon, O.  
Pennsylvania Steel Pulley Co., Pittsburgh, Pa.  
Poole Engineering & Machine Co., Baltimore, Md.  
Saginaw Mfg. Co., Saginaw, Mich.  
T. B. Wood's Sons Co., Chambersburg, Pa.

**Pulleys, Split Steel—**

American Pulley Co., 29th and Bristol Sts., Philadelphia, Pa.  
Pennsylvania Steel Pulley Co., Pittsburgh.

**Pulleys, Steel Face—**

Falls Rivet & Machine Co., Cuyahoga Falls, O.

**Pulleys, Tackle or Awning—**

Thomas Laughlin Co., Portland, Me.  
A. Leschen & Sons Rope Co., St. Louis.  
Ney Mfg. Co., Canton, O.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Pulleys, Upright—**

Thomas Laughlin Co., Portland, Me.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Pulleys, Wagon Brake—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.

**Pulleys, Wire Stretching—**

Otis A. Smith, Rockfall, Ct.

**Pulleys, Wood Rim—**

Dodge Mfg. Co., Mishawaka, Ind.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.  
Lane Mfg. Co., Montpelier, Vt.  
Standard Clutch Mfg. Co., Sidney, O.

**Pulleys, Wood Split—**

American Well Works, Aurora, Ill.  
Dodge Mfg. Co., Mishawaka, Ind.  
Falls Rivet & Machine Co., Cuyahoga Falls, O.  
Reeves Pulley Co., Columbus, Ind.  
Saginaw Mfg. Co., Saginaw, Mich.  
Standard Clutch Mfg. Co., Sidney, O.

**Pulleys, Wrought Steel Split**

American Pulley Co., 29th and Bristol Sts., Philadelphia, Pa.

**Pulling Machine for Oil Wells—**

S. G. Milton & Son, Franklin, Pa.

**Pulls, Bell—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

W. & J. Tiebout, 118 Chambers St., N. Y.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Pulls, Closet—**

(See Plumbing Supplies.)

**Pulls, Door—**

Arcade Mfg. Co., Freeport, Ill.

Chicago Spring Butt Co., Chicago, Ill.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Heath Foundry & Mfg. Co., Plymouth, O.

P. E. Kohler & Co., Canton, O.

National Mfg. Co., Sterling, Ill.

Ney Mfg. Co., Canton, O.

Parker Wire Goods Co., Worcester, Mass.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Shelby Spring Hinge Co., Shelby, O.

W. & J. Tiebout, 118 Chambers St., N. Y.

Wire Goods Co., Worcester, Mass.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Pulls, Drawer—**

Arcade Mfg. Co., Freeport, Ill.

Jos. Bardsley, 147-151 Baxter St., N. Y.

W. J. Clark Co., Salem, O.

Columbia Grey Iron Co., Columbia, Pa.

Eagle Lock Co., Terryville, Ct.

Griffin Mfg. Co., Erie, Pa.

H. B. Ives Co., New Haven, Ct.

Otto Konislow Mfg. Co., Cleveland, O.

Lawrence Bros., Sterling, Ill.

McKinney Mfg. Co., Allegheny, Pa.

National Mfg. Co., Sterling, Ill.

Parker Wire Goods Co., Worcester, Mass.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Piqua Handle & Mfg. Co., Piqua, O.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Shelby Spring Hinge Co., Shelby, O.

Stanley Works, New Britain, Ct.

Taylor & Boggs Foundry Co., Cleveland.

Wire Goods Co., Worcester, Mass.

Wrightsville Hardware Co., Wrightsville, Pa.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Pulls, Screen or Box—**

H. B. Ives Co., New Haven, Ct.

Parker Wire Goods Co., Worcester, Mass.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Shelby Spring Hinge Co., Shelby, O.

Turner & Stanton Co., Norwich, Ct.

**Pulls, Shade—**

Turner & Stanton Co., Norwich, Ct.

**Pulls, Window—**

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Shelby Spring Hinge Co., Shelby, O.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Pulpers, Vegetable—**

(See Cutters and Pulpers, Vegetable.)

**Pulp Mill Machinery—**

Jeffrey Mfg. Co., Columbus, O.

**Pulverizers, Ore and Clay—**

Jeffrey Mfg. Co., Columbus, O.

**Pump Chain, Cylinders.**

**Rods—**

(See Chain, Well Supplies, Rods.)

**Pump Fitters' Supplies—**

Humphreys Mfg. Co., Mansfield, O.

Walworth Mfg. Co., Boston, Mass.

**Pump Fixtures, Chain—**

Cleveland Galvanizing Works, Cleveland.

W. & B. Douglas, Middletown, Ct.

**Pump Leathers—**

(See Leathers, Pump.)

**Pump Pressure Regulators—**

(See Regulators, Pump Pressure.)

**Pump Rod Couplings—**

(See Couplings, Pump Rod.)

**Pump Supplies, Beer—**

H. O. Canfield Co., Bridgeport, Ct.

**Pumping Oil Wells, Machinery for—**

Bowditch & Co., Bradford, Pa.

A. D. Cook, Lawrenceburg, Ind.

Dale Engine & Supply Co., Ltd., Franklin, Pa.

Du Bois Iron Works, Du Bois, Pa.

Keystone Driller Co., Beaver Falls, Pa.

Riverside Engine Co., Oil City, Pa.

Tate, Jones & Co., Inc., Pittsburgh, Pa.

**Pumping Sets, Electric—**

Holtzer-Cabot Electric Co., Boston, Mass.

**Pumps, Air—**

Deming Co., Salem, O.

Goulds Mfg. Co., Seneca Falls, N. Y.

Mesta Machine Co., Pittsburgh, Pa.

**Pumps, Air Lift—**

American Well Works, Aurora, Ill.

Clayton Air Compressor Works, 114-118 Liberty St., New York.

Du Bois Iron Works, Du Bois, Pa.

Ingersoll-Rand Co., 11 Broadway, N. Y.

Riverside Engine Co., Oil City, Pa.

**Pumps, Ale or Beer—**

Dean Bros. Steam Pump Works, Indianapolis, Ind.

Deming Co., Salem, O.

Goulds Mfg. Co., Seneca Falls, N. Y.

**Pumps, Artesian Well, and Cylinders—**

American Well Works, Aurora, Ill.

Barnes Mfg. Co., Mansfield, O.

A. D. Cook, Lawrenceburg, Ind.

Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.

Goulds Mfg. Co., Seneca Falls, N. Y.

Humphreys Mfg. Co., Mansfield, O.

Keystone Driller Co., Beaver Falls, Pa.

John H. McGowan Co., Cincinnati, O.

Mast, Fosco & Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

Union Steam Pump Co., Battle Creek, Mich.

**Pumps, Automatic—**

Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.

**Pumps, Ballast—**

(See Pumps, Boiler Feed.)

**Pumps, Bicycle and Automobile—**

Bridgeport Brass Co., 253 B'way, N. Y.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Scovill Mfg. Co., Waterbury, Ct.  
 Turner Brass Works, Sycamore, Ill.  
 Union Steam Pump Co., Battle Creek, Mich.

**Pumps, Boat, Cellar, &c.—**

Deming Co., Salem, O.  
 Thomas Laughlin Co., Portland, Me.

**Pumps, Boiler Feed—**

Alberger Condenser Co., 95 Liberty St., New York.  
 Alberger Pump Co., 95 Liberty St., N. Y.  
 American Well Works, Aurora, Ill.  
 Barnes Mfg. Co., Mansfield, O.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 De Laval Steam Turbine Co., Trenton, N. J.  
 Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Humphries Mfg. Co., Mansfield, O.  
 Benj. F. Kelley & Son, 91 Liberty St., N. Y.  
 John H. McGowan Co., Cincinnati, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Mason Regulator Co., Boston, Mass.  
 F. E. Myers & Bro., Ashland, O.  
 Frank L. Patterson & Co., 26 Cortlandt St., New York.  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
 Union Steam Pump Co., Battle Creek, Mich.

**Pumps, Boiler Test—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.  
 Barnes Mfg. Co., Mansfield, O.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Crosby Steam Gauge & Valve Co., Boston.  
 Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 A. L. Henderer's Sons, Wilmington, Del.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Pumps, Brass—**

Barnes Mfg. Co., Mansfield, O.  
 Bridgeport Brass Co., 253 B'way, N. Y.  
 Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Humphries Mfg. Co., Mansfield, O.  
 Mast, Foos & Co., Springfield, O.  
 F. E. Myers & Bro., Ashland, O.  
 Turner Brass Works, Sycamore, Ill.

**Pumps, Brewers'—**

American Well Works, Aurora, Ill.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 Deming Co., Salem, O.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 John H. McGowan Co., Cincinnati, O.  
 Union Steam Pump Co., Battle Creek, Mich.

**Pumps, Carriage—**

Bridgeport Brass Co., 253 B'way, N. Y.

**Pumps, Centrifugal—**

Alberger Condenser Co., 95 Liberty St., New York.  
 Alberger Pump Co., 95 Liberty St., N. Y.  
 American Well Works, Aurora, Ill.  
 Barnes Mfg. Co., Mansfield, O.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Buffalo Forge Co., Buffalo, N. Y.  
 De Laval Steam Turbine Co., Trenton, N. J.  
 Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Humphries Mfg. Co., Mansfield, O.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Wickes Bros., Saginaw, Mich.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Pumps, Centrifugal, Liners and Flyers for—**

Alberger Pump Co., 95 Liberty St., N. Y.  
 Taylor Iron & Steel Co., High Bridge, N. J.

**Pumps, Chain—**

Cleveland Galvanizing Works, Cleveland.  
 Goulds Mfg. Co., Seneca Falls, N. Y.

**Pumps, Circulating—**

Alberger Condenser Co., 95 Liberty St., New York.  
 Alberger Pump Co., 95 Liberty St., N. Y.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.

De Laval Steam Turbine Co., Trenton, N. J.

Deming Co., Salem, O.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Union Steam Pump Co., Battle Creek, Mich.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Pumps, Cistern, Pitcher Spout, &c.—**

Barnes Mfg. Co., Mansfield, O.  
 Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hayes Pump & Planter Co., Galva, Ill.  
 Hess, Snyder & Co., Massillon, O.  
 Humphries Mfg. Co., Mansfield, O.  
 Mast-Foos Co., Springfield, O.  
 F. E. Myers & Bro., Ashland, O.  
 Richmond Foundry & Mfg. Co., Inc., Richmond, Va.

**Pumps, Compressed Air—**

Deming Co., Salem, O.  
 F. E. Myers & Bro., Ashland, O.

**Pumps, Compression and Vacuum—**

Barnes Mfg. Co., Mansfield, O.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Clark Novelty Co., Rochester, N. Y.  
 Crosby Steam Gauge & Valve Co., Boston.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 Deming Co., Salem, O.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Humphries Mfg. Co., Mansfield, O.

John H. McGowan Co., Cincinnati, O.  
Union Steam Pump Co., Battle Creek,  
Mich.

**Pumps, Contractors'—**  
Boston & Lockport Block Co., East Bos-  
ton, Mass.

Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Du Bois Iron Works, Du Bois, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
Thomas Laughlin Co., Portland, Me.  
Mast, Foss & Co., Springfield, O.  
F. E. Myers & Bro., Ashland, O.

**Pumps, Copper—**  
W. & B. Douglas, Middletown, Ct.  
Du Bois Iron Works, Du Bois, Pa.  
F. E. Myers & Bro., Ashland, O.

**Pumps, Deck—**  
(See Pumps, Ship.)

**Pumps, Deep Well—**  
American Well Works, Aurora, Ill.  
Barnes Mfg. Co., Mansfield, O.  
Dean Bros. Steam Pump Works, Indian-  
apolis, Ind.

Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Du Bois Iron Works, Du Bois, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
Keystone Driller Co., Beaver Falls, Pa.  
John H. McGowan Co., Cincinnati, O.  
Mast-Foss Co., Springfield, O.  
F. E. Myers & Bro., Ashland, O.  
Pittsburgh Valve, Foundry & Construc-  
tion Co., Pittsburgh, Pa.  
Union Steam Pump Co., Battle Creek,  
Mich.

**Pumps, Diaphragm—**  
American Well Works, Aurora, Ill.  
Barnes Mfg. Co., Mansfield, O.  
Boston & Lockport Block Co., East Bos-  
ton, Mass.

Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
Humphreys Mfg. Co., Mansfield, O.  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

**Pumps, Electric—**  
American Well Works, Aurora, Ill.  
Buffalo Forge Co., Buffalo, N. Y.  
A. D. Cook, Lawrenceburg, Ind.  
Dean Bros. Steam Pump Works, Indian-  
apolis, Ind.

De Laval Steam Turbine Co., Trenton, N.J.

Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Du Bois Iron Works, Du Bois, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
John H. McGowan Co., Cincinnati, O.  
Mast, Foss & Co., Springfield, O.  
F. E. Myers & Bro., Ashland, O.  
Union Steam Pump Co., Battle Creek,  
Mich.

Westinghouse Electric & Mfg. Co., Pitts-  
burgh, Pa.

**Pumps, Elevator—**  
Buffalo Forge Co., Buffalo, N. Y.  
Dean Bros. Steam Pump Works, Indian-  
apolis, Ind.

Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Du Bois Iron Works, Du Bois, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
John H. McGowan Co., Cincinnati, O.  
Union Steam Pump Co., Battle Creek,  
Mich.

**Pumps, Elevator Bucket  
and Purifying—**  
Cleveland Galvanizing Works, Cleveland.  
Du Bois Iron Works, Du Bois, Pa.  
F. E. Myers & Bro., Ashland, O.

**Pumps, Engine, Gas and Oil—**  
Du Bois Iron Works, Du Bois, Pa.

**Pumps, Fire—**  
American Well Works, Aurora, Ill.  
Buffalo Forge Co., Buffalo, N. Y.  
Dean Bros. Steam Pump Works, Indian-  
apolis, Ind.

De Laval Steam Turbine Co., Trenton,  
N. J.

Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Du Bois Iron Works, Du Bois, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
Humphreys Machine Co., Keene, N. H.  
Humphreys Mfg. Co., Mansfield, O.  
John H. McGowan Co., Cincinnati, O.  
Mast-Foss Co., Springfield, O.  
F. E. Myers & Bro., Ashland, O.  
Union Steam Pump Co., Battle Creek,  
Mich.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Pumps, Force—**  
American Well Works, Aurora, Ill.  
Barnes Mfg. Co., Mansfield, O.  
Buffalo Forge Co., Buffalo, N. Y.  
Charter Gas Engine Co., Sterling, Ill.  
Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Du Bois Iron Works, Du Bois, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
Hayes Pump & Planter Co., Galva, Ill.  
A. L. Henderer's Sons, Wilmington, Del.  
Hess-Snyder Co., Massillon, O.  
Humphrey Machine Co., Keene, N. H.  
Humphreys Mfg. Co., Mansfield, O.  
Mast-Foss Co., Springfield, O.  
F. E. Myers & Bro., Ashland, O.  
A. L. Schultz & Son, 570-572 Elston Ave.,  
Chicago, Ill.

**Pumps, Force, House—**  
Barnes Mfg. Co., Mansfield, O.

**Pumps, French—**  
Mast, Foss & Co., Springfield, O.

**Pumps, Gas Engine Start-  
ing—**  
Deming Co., Salem, O.

Du Bois Iron Works, Du Bois, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.

**Pumps, Gas, Gasoline and  
Alcohol—**  
Grant Mfg. & Machine Co., Bridgeport,  
Ct.

**Pumps, Gauge Test—**  
American Steam Gauge & Valve Mfg.  
Co., Boston, Mass.

Deming Co., Salem, O.  
Walworth Mfg. Co., Boston, Mass.

**Pumps, Grouting, Sewerage,  
Quarry—**

American Well Works, Aurora, Ill.  
Barnes Mfg. Co., Mansfield, O.  
Boston & Lockport Block Co., East Bos-  
ton, Mass.

Buffalo Forge Co., Buffalo, N. Y.  
Dean Bros. Steam Pump Works, Indian-  
apolis, Ind.

Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Du Bois Iron Works, Du Bois, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.

Humphries Mfg. Co., Mansfield, O.  
 Ingersoll-Rand Co., 11 Broadway, N. Y.  
 John H. McGowan Co., Cincinnati, O.  
 Mast, Foos & Co., Springfield, O.  
 F. E. Myers & Bro., Ashland, O.

**Pumps, Ham Preserving—**  
 Deming Co., Salem, O.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Silver Mfg. Co., Salem, O.

**Pumps, Horse-power—**  
 Barnes Mfg. Co., Mansfield, O.  
 Deming Co., Salem, O.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Humphries Mfg. Co., Mansfield, O.  
 F. E. Myers & Bro., Ashland, O.

**Pumps, Hydraulic—**  
 Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

Chambersburg Engineering Co., Chambersburg, Pa.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.

Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Charles F. Elmes Engineering Works, 253-259 Fulton St., Chicago, Ill.

Goulds Mfg. Co., Seneca Falls, N. Y.  
 A. L. Henderer's Sons, Wilmington, Del.  
 John H. McGowan Co., Cincinnati, O.  
 Mesta Machine Co., Pittsburgh, Pa.  
 F. E. Myers & Bro., Ashland, O.  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

Union Steam Pump Co., Battle Creek, Mich.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

Watson-Stillman Co., 50 Church St., N.Y.

**Pumps, Hydraulic, Electrically Driven—**  
 Chambersburg Engineering Co., Chambersburg, Pa.

**Pumps, Irrigation—**  
 Alberger Pump Co., 95 Liberty St., N. Y.

American Well Works, Aurora, Ill.

Barnes Mfg. Co., Mansfield, O.

Boston & Lockport Block Co., East Boston, Mass.

Buffalo Forge Co., Buffalo, N. Y.

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

Charter Gas Engine Co., Sterling, Ill.

Connersville Blower Co., Connersville, Ind.

Dean Bros. Steam Pump Works, Indianapolis, Ind.

De Laval Steam Turbine Co., Trenton, N. J.

Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.

Du Bois Iron Works, Du Bois, Pa.

Goulds Mfg. Co., Seneca Falls, N. Y.

Humphries Mfg. Co., Mansfield, O.

John H. McGowan Co., Cincinnati, O.

Mast, Foos & Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

Power Specialty Co., 111 Broadway, N. Y.

R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Pumps, Jacket—**

Humphries Mfg. Co., Mansfield, O.

**Pumps, Lift—**

American Well Works, Aurora, Ill.

Barnes Mfg. Co., Mansfield, O.

Charter Gas Engine Co., Sterling, Ill.

Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.

Du Bois Iron Works, Du Bois, Pa.

Goulds Mfg. Co., Seneca Falls, N. Y.

Hayes Pump & Planter Co., Galva, Ill.

Hess-Snyder Co., Massillon, O.

Humphries Mfg. Co., Mansfield, O.

Keystone Driller Co., Beaver Falls, Pa.

Mast-Foos Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

**Pumps, Marine—**

Dean Bros. Steam Pump Works, Indianapolis, Ind.

W. & B. Douglas, Middletown, Ct.

Du Bois Iron Works, Du Bois, Pa.

Goulds Mfg. Co., Seneca Falls, N. Y.

Mast, Foos & Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

Union Steam Pump Co., Battle Creek, Mich.

**Pumps, Mine (Cylinders and Heads)—**

Alberger Pump Co., 95 Liberty St., N. Y.

American Well Works, Aurora, Ill.

Barnes Mfg. Co., Mansfield, O.

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Buffalo Forge Co., Buffalo, N. Y.

Dean Bros. Steam Pump Works, Indianapolis, Ind.

De Laval Steam Turbine Co., Trenton, N. J.

Deming Co., Salem, O.

Du Bois Iron Works, Du Bois, Pa.

Goulds Mfg. Co., Seneca Falls, N. Y.

Humphries Mfg. Co., Mansfield, O.

Ingersoll-Rand Co., 11 Broadway, New York.

Mast, Foos & Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

Union Steam Pump Co., Battle Creek, Mich.

**Pumps, Motor Boat, Bilge—**

Bevin Bros. Mfg. Co., East Hampton, Ct.

Deming Co., Salem, O.

**Pumps, Natural Gas—**

Du Bois Iron Works, Du Bois, Pa.

**Pumps, Oil and Air, Hand-**  
Lunkenheimer Co., Cincinnati, O.

**Pumps, Oil, Machine-**  
Brown & Sharpe Mfg. Co., Providence, R. I.

Du Bois Iron Works, Du Bois, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
Landis Machine Co., Waynesboro, Pa.  
Pratt & Whitney Co., Hartford, Ct.

**Pumps, Fitcher Spout-**  
(See Pumps, Cistern.)

**Pumps, Plumbers' and Gas Fitters'-**

Barnes Mfg. Co., Mansfield, O.  
Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
Humphries Mfg. Co., Mansfield, O.

**Pumps, Pneumatic Water Supply-**

Barnes Mfg. Co., Mansfield, O.

**Pumps, Power-**

American Well Works, Aurora, Ill.  
Barnes Mfg. Co., Mansfield, O.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Buffalo Forge Co., Buffalo, N. Y.  
Charter Gas Engine Co., Sterling, Ill.  
A. D. Cook, Lawrenceburg, Ind.  
Dean Bros. Steam Pump Works, Indianapolis, Ind.

Deming Co., Salem, O.  
W. & B. Douglas, Middletown, Ct.  
Du Bois Iron Works, Du Bois, Pa.  
Richard Dudgeon, 24-26 Columbia St., New York.

Chas. F. Elmes Engineering Works, 233-235 Fulton St., Chicago, Ill.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
Humphries Mfg. Co., Mansfield, O.  
John H. McGowan Co., Cincinnati, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Mast-Foos Co., Springfield, O.  
Mcsta Machine Co., Pittsburgh, Pa.  
F. E. Myers & Bro., Ashland, O.  
Frank L. Patterson & Co., 26 Cortlandt St., New York.

Union Steam Pump Co., Battle Creek, Mich.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

Watson-Stillman Co., 50 Church St., New York.

R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**MERCHANTS.**

W. R. Beatty Machine & Equipment Co., Pittsburgh, Pa.

**Pumps, Pressure-**

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Dean Bros. Steam Pump Works, Indianapolis, Ind.

Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.

Du Bois Iron Works, Du Bois, Pa.

Goulds Mfg. Co., Seneca Falls, N. Y.

A. L. Henderer's Sons, Wilmington, Del.

John H. McGowan Co., Cincinnati, O.

Mast, Foos & Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

Union Steam Pump Co., Battle Creek, Mich.

**Pumps, Pressure Floor-**  
Turner Brass Works, Sycamore, Ill.

**Pumps, Private Water Works-**

Deming Co., Salem, O.  
Mast, Foos & Co., Springfield, O.  
F. E. Myers & Bro., Ashland, O.

**Pumps, Quarry-**  
(See Pumps, Grouting, Sewerage and Quarry.)

**Pumps, Ratchet Handle-**

Deming Co., Salem, O.

F. E. Myers & Bro., Ashland, O.

**Pumps, Rotary-**

American Well Works, Aurora, Ill.  
Barnes Mfg. Co., Mansfield, O.  
Connersville Blower Co., Connersville, Ind.  
Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
Humphrey Machine Co., Keene, N. H.  
(See also Pumps, Centrifugal.)

**Pumps, Self Measuring-**  
Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

**Pumps, Sewage-**  
(See Pumps, Grouting, Sewerage, Quarry.)

**Pumps, Ship and Deck-**

Abendroth & Root Mfg. Co., Newburgh, N. Y.

Barnes Mfg. Co., Mansfield, O.

Boston & Lockport Block Co., East Boston, Mass.

Dean Bros. Steam Pump Works, Indianapolis, Ind.

Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.

Du Bois Iron Works, Du Bois, Pa.

Goulds Mfg. Co., Seneca Falls, N. Y.

Humphries Mfg. Co., Mansfield, O.

John H. McGowan Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Mast, Foos & Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

**Pumps, Sinking-**

American Well Works, Aurora, Ill.

Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

**Pumps, Siphon-**

Barnes Mfg. Co., Mansfield, O.

Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.

Goulds Mfg. Co., Seneca Falls, N. Y.

Humphries Mfg. Co., Mansfield, O.

John S. Leng's Son & Co., 33 Murray St., New York.

Mast-Foos Co., Springfield, O.

F. E. Myers & Bro., Ashland, O.

**Pumps, Spraying-**

Barnes Mfg. Co., Mansfield, O.

Deming Co., Salem, O.

W. & B. Douglas, Middletown, Ct.

Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 E. Keeler Co., Williamsport, Pa.  
 Keystone Driller Co., Beaver Falls, Pa.  
 Mason Regulator Co., Boston, Mass.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
 Union Steam Pump Co., Battle Creek, Mich.  
 Watson-Stillman Co., 50 Church St., New York.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**MERCHANTS.**

Charles Behlen, 72 Trinity Pl., New York.  
 Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.  
 Cleveland Belting & Machinery Co., Cleveland, O.  
 Thomas P. Conard & Co., 119 S. 4th St., Philadelphia, Pa.  
 Benj. F. Kelley & Son, 31 Liberty St., New York.  
 McDowell & Co., Allegheny, Pa.  
 John H. McGowan Co., Cincinnati, O.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Edgar M. Moore & Co., Pittsburgh, Pa.  
 Norton Machinery Co., Cincinnati, O.  
 Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.  
 F. Seyfert's Sons, Inc., 437-441 N. 3d St., Philadelphia, Pa.  
 Frank Toomey, 127-131 N. 3d St., Philadelphia, Pa.  
 Jacob Ullman, Buffalo, N. Y.  
 Wickes Bros., Saginaw, Mich.  
 C. C. Wormer Machinery Co., Detroit, Mich.

**Pumps, Steam Jet—**

John H. McGowan Co., Cincinnati, O.

**Pumps, Steam Turbine—**

Alberger Pump Co., 95 Liberty St., N. Y.  
 American Well Works, Aurora, Ill.  
 De Laval Steam Turbine Co., Trenton, N. J.  
 Watson-Stillman Co., 50 Church St., New York.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Pumps, Sump—**

(See Pumps, Centrifugal.)

**Pumps, Tank—**

American Well Works, Aurora, Ill.  
 Barnes Mfg. Co., Mansfield, O.  
 Buffalo Forge Co., Buffalo, N. Y.  
 A. D. Cook, Lawrenceburg, Ind.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hess-Snyder Co., Massillon, O.  
 Humphries Mfg. Co., Mansfield, O.  
 John H. McGowan Co., Cincinnati, O.  
 Mast-Foos Co., Springfield, O.  
 F. E. Myers & Bro., Ashland, O.  
 Union Steam Pump Co., Battle Creek, Mich.

**Pumps, Traction Engine—**

Deming Co., Salem, O.  
 F. E. Myers & Bro., Ashland, O.

**Pumps, Trench—**

Barnes Mfg. Co., Mansfield, O.  
 Boston & Lockport Block Co., East Boston, Mass.  
 Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Humphries Mfg. Co., Mansfield, O.

**Pumps, Triplex—**

Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Goulds Mfg. Co., Seneca Falls, N. Y.

**Pumps, Underwriter—**

Alberger Pump Co., 95 Liberty St., N. Y.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.

**Pumps, Vacuum—**

Alberger Condenser Co., 95 Liberty St., New York.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Rury Compressor Co., Erie, Pa.  
 Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
 Clayton Air Compressor Works, 114-118 Liberty St., New York.

Connorsville Blower Co., Connorsville, Ind.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.

**Pumps, Water Works—**

Deming Co., Salem, O.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Union Steam Pump Co., Battle Creek, Mich.  
 Robt. Wetherill & Co., Inc., Chester, Pa.  
**Pumps, Vault and Cesspool—**  
 Barnes Mfg. Co., Mansfield, O.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Humphries Mfg. Co., Mansfield, O.

**Pumps, Water Works—**

Alberger Pump Co., 95 Liberty St., N. Y.  
 American Well Works, Aurora, Ill.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Buffalo Forge Co., Buffalo, N. Y.  
 De Laval Steam Turbine Co., Trenton, N. J.

**Pumps, Water Works—**

Deming Co., Salem, O.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 John H. McGowan Co., Cincinnati, O.  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
 Southwark Foundry & Machine Co., Washington Ave. & 5th St., Phila.  
 Union Steam Pump Co., Battle Creek, Mich.

R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Pumps, Windmill—**

Barnes Mfg. Co., Mansfield, O.  
 A. D. Cook, Lawrenceburg, Ind.  
 Deming Co., Salem, O.  
 W. & B. Douglas, Middletown, Ct.  
 Du Bois Iron Works, Du Bois, Pa.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hayes Pump & Planter Co., Galva, Ill.  
 Hess-Snyder Co., Massillon, O.  
 Humphries Mfg. Co., Mansfield, O.  
 Mast-Foos Co., Springfield, O.  
 F. E. Myers & Bro., Ashland, O.

**Pumps, Wing—**

(See Pumps, Centrifugal.)

**Pumps, Yacht—**

(See Pumps, Boat, Cellar, &c.)

**Punches and Dies. Com-pound—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

Blake & Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Ferracute Machine Co., Bridgeton, N. J.

E. Konigslow Stamping & Tool Works, Cleveland, O.

Otto Konigslow Mfg. Co., Cleveland, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Waltham Machine Works, Waltham, Mass.

Zeh & Hahnemann Co., Newark, N. J.

**Punches and Dies for Plate Work—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

Badger State Machine Co., Janesville, Wis.

Bertsch & Co., Cambridge City, Ind.

E. W. Bliss Co., Brooklyn, N. Y.

Buffalo Forge Co., Buffalo, N. Y.

Cincinnati Punch & Shear Co., Cincinnati, O.

Ferracute Machine Co., Bridgeton, N. J.

A. Garrison Foundry Co., Pittsburgh, Pa.

Irving Mfg. & Tool Co., 157 Chambers St., New York.

Lewis Foundry & Machine Co., Groveton, Pa.

Long & Allstatter Co., Hamilton, O.

McDougall & Potter Co., 606-612 W. 55th St., New York.

Mackintosh, Hemphill & Co., Pittsburgh.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.

Nappanee Iron Works, Nappanee, Ind.

New Doty Mfg. Co., Janesville, Wis.

Niles-Bement-Pond Co., 111 Broadway, N.Y.

Royersford Foundry & Machine Co., Royersford, Pa.

Wickes Bros., Saginaw, Mich.

Williams, White & Co., Inc., Moline, Ill.

R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Punches and Fasteners.**

**Paper—**

Eyelet Tool Co., Boston, Mass.

**Punches and Dies. Ship-yard—**

Badger State Machine Co., Janesville, Wis.

Bertsch & Co., Cambridge City, Ind.

E. W. Bliss Co., Brooklyn, N. Y.

Cincinnati Punch & Shear Co., Cincinnati, O.

A. L. Henderer's Sons, Wilmington, Del.

Wickes Bros., Saginaw, Mich.

**Punches, Automatic Center—**

L. S. Starrett Co., Athol, Mass.

**Punches, Belt—**

W. J. Clark Co., Salem, O.

Eyelet Tool Co., Boston, Mass.

Charles Morrill, 277 Broadway, N. Y.

Otis A. Smith, Rockfall, Ct.

**Punches, Blacksmiths—**

Badger State Machine Co., Janesville, Wis.

Hubbard & Co., Pittsburgh, Pa.

**Punches. Butcher Saw**

**Blade—**

Goodell-Pratt Co., Greenfield, Mass.

H. G. Thompson & Son Co., New Haven, Ct.

**Punches, Center—**

(See Punches, Drive.)

**Punches, Centering—**

Brown & Sharpe Mfg. Co., Providence, R. I.

Goodell Mfg. Co., Greenfield, Mass.

**Punches, Check—**

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

**Punches, Conductor, Ticket, &c.—**

American Railway Supply Co., 42 Park Place, New York.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Fred J. Meyers Mfg. Co., Hamilton, O.

Smith & Egge Mfg. Co., Bridgeport, Ct.

R. Woodman Mfg. & Supply Co., Boston.

**Punches, Drive—**

Bemis & Call Hardware & Tool Co., Springfield, Mass.

Buck Bros., Millbury, Mass.

Cronk & Carrier Mfg. Co., Elmira, N. Y.

Elmore Tool Mfg. Co., Hartford, Ct.

Eyelet Tool Co., Boston, Mass.

Goodell-Pratt Co., Greenfield, Mass.

Keystone Mfg. Co., Buffalo, N. Y.

M. Lanz & Sons, Pittsburgh, Pa.

Massachusetts Saw Works, Chicopee, Mass.

H. H. Mayhew Co., Shelburne Falls, Mass.

Ney Mfg. Co., Canton, O.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Richmond Forgings Corporation, Richmond, Va.

Richmond Foundry & Mfg. Co., Inc., Richmond, Va.

L. S. Starrett Co., Athol, Mass.

Transue & Williams Co., Alliance, O.

Tuck Mfg. Co., Brockton, Mass.

Whitman & Barnes Mfg. Co., Chicago.

**Punches, Embossing—**

E. W. Bliss Co., Brooklyn, N. Y.

Ferracute Machine Co., Bridgeton, N. J.

Otto Konigslow Mfg. Co., Cleveland, O.

E. Konigslow Stamping & Tool Works, Cleveland, O.

Schwerdtle Stamp Co., Bridgeport, Ct.

R. Woodman Mfg. & Supply Co., Boston.

**Punches, Hand and Power—**

Adrian Machine Works, Brooklyn, N. Y.

Alliance Machine Co., Alliance, O.

American Lock Nut Co., Oregon, Ill.

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

Badger State Machine Co., Janesville, Wis.

Bertsch & Co., Cambridge City, Ind.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

E. W. Bliss Co., Brooklyn, N. Y.

Buffalo Forge Co., Buffalo, N. Y.

Cincinnati Punch & Shear Co., Cincinnati, O.

Cleveland Punch & Shear Works Co., Cleveland, O.

R. M. Clough, Tolland, Ct.

Consolidated Press & Tool Co., Hastings, Mich.



H. C. Cook & Co., Ansonia, Ct.  
Richard Dudgeon, 24-26 Columbia St., N. Y.  
Excelsior Tool & Machine Co., E. St.  
Louis, Ill.

Eyelet Tool Co., Boston, Mass.  
Ferracute Machine Co., Bridgeton, N. J.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
A. L. Henderer's Sons, Wilmington, Del.  
Hilles & Jones Co., Wilmington, Del.  
R. E. Kidder, Worcester, Mass.  
E. Konigalaw Stamping & Tool Works,  
Cleveland, O.

Otto Konigslaw Mfg. Co., Cleveland, O.  
Long & Allstatter Co., Hamilton, O.  
Morgan Engineering Co., Alliance, O.  
Chas. Morrill, 277 Broadway, New York.  
Frank Mossberg & Co., Attleboro, Mass.  
Nappanee Iron Works, Nappanee, Ind.  
New Doty Mfg. Co., Janesville, Wis.  
Niagara Machine & Tool Works, Buffalo,  
N. Y.

Niles-Bement-Pond Co., 111 Broadway,  
New York.  
Novelty Iron Works, Dubuque, Ia.  
George A. Ohl & Co., Newark, N. J.  
Pratt & Whitney Co., Hartford, Ct.  
Roversford Foundry & Machine Co.,  
Roversford, Pa.

Schats Mfg. Co., Chappaqua, N. Y.  
Vandyck, Churchill Co., 8 Dey St., N. Y.  
W. & S. Mfg. Co., Worcester, Mass.  
Watson-Stillman Co., 50 Church St.,  
New York.

Wickes Bros., Saginaw, Mich.  
Wiley & Russell Mfg. Co., Greenfield,  
Mass.

Williams, White & Co., Moline, Ill.  
R. Woodman Mfg. & Supply Co., Boston.  
Zeh & Hahnemann Co., Newark, N. J.

#### MERCHANTS.

Baird Machinery Co., Pittsburgh, Pa.  
W. R. Beatty Machinery & Equipment  
Co., Pittsburgh, Pa.  
Carlin Machinery & Supply Co., Inc.,  
N. S. Pittsburgh, Pa.  
Barclay M. Everson, Pittsburgh, Pa.  
Hill, Clarke & Co., Boston, Mass.  
Irving Mfg. & Tool Co., 157 Chambers St.,  
New York.

J. J. McCabe, 14 Dey St., New York.  
Manning, Maxwell & Moore, Inc., 85-89  
Liberty St., New York.  
Marshall & Huchart Machinery Co., 22 S.  
Canal St., Chicago, Ill.

Edgar M. Moore & Co., Pittsburgh, Pa.  
Moteh & Merryweather Machinery Co.,  
Cleveland, O.  
Prentiss Tool & Supply Co., 115 Liberty  
St., New York.

Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.  
Scully Steel & Iron Co., Halsted and  
Wayman Sts., Chicago, Ill.

L. F. Seyfert's Sons, Inc., 437-441 N. 3d  
St., Philadelphia, Pa.  
A. D. White Machinery Co., 39-41 S.  
Canal St., Chicago, Ill.

#### Punches, Hand, Tube and Manhole—

Alliance Machine Co., Alliance, O.  
Badger State Machine Co., Janesville,  
Wis.  
Bertsch & Co., Cambridge City, Ind.  
Cincinnati Punch & Shear Co., Cincin-  
nati, O.

Hilles & Jones Co., Wilmington, Del.  
Long & Allstatter Co., Hamilton, O.  
Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Morgan Engineering Co., Alliance, O.  
New Doty Mfg. Co., Janesville, Wis.  
Wickes Bros., Saginaw, Mich.

**Punches, Hydraulic—**  
Alliance Machine Co., Alliance, O.  
Bethlehem Foundry & Machine Co.,  
South Bethlehem, Pa.

Chambersburg Engineering Co., Cham-  
bersburg, Pa.  
Richard Dudgeon, 24-26 Columbia St.,  
New York.

A. Garrison Foundry Co., Pittsburgh, Pa.  
A. L. Henderer's Sons, Wilmington, Del.  
Mackintosh, Hemphill & Co., Pittsburgh.  
Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.  
Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.

United Engineering & Foundry Co., Pitts-  
burgh, Pa.  
Watson-Stillman Co., 50 Church St.,  
New York.

Wickes Bros., Saginaw, Mich.  
Williams, White & Co., Moline, Ill.  
R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Punches, Multiple—**  
Adriance Machine Works, Brooklyn, N. Y.  
Alliance Machine Co., Alliance, O.  
Armstrong-Blum Mfg. Co., 109 N. Fran-  
cisco Ave., Chicago, Ill.

Badger State Machine Co., Janesville,  
Wis.  
Bertsch & Co., Cambridge City, Ind.  
E. W. Bliss Co., Brooklyn, N. Y.

Cincinnati Punch & Shear Co., Cincin-  
nati, O.  
Cleveland Punch & Shear Works Co.,  
Cleveland, O.

Consolidated Press & Tool Co., Hastings,  
Mich.

Ferracute Machine Co., Bridgeton, N. J.  
Hilles & Jones Co., Wilmington, Del.  
Long & Allstatter Co., Hamilton, O.  
Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Morgan Engineering Co., Alliance, O.  
New Doty Mfg. Co., Janesville, Wis.  
Niagara Machine & Tool Works, Buffalo,  
N. Y.

Niles-Bement-Pond Co., 111 Broadway, N. Y.  
George A. Ohl & Co., Newark, N. J.  
Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

Williams, White & Co., Moline, Ill.  
Zeh & Hahnemann Co., Newark, N. J.

**Punches, Oval—**  
(See Punches, Drive.)

**Punches, Paper—**  
Eyelet Tool Co., Boston, Mass.  
Ferracute Machine Co., Bridgeton, N. J.  
Chas. Morrill, 277 Broadway, New York.  
R. Woodman Mfg. & Supply Co., Boston.  
Zeh & Hahnemann Co., Newark, N. J.

**Punches, Pneumatic—**  
Hanna Engineering Works, 840 Elston  
Ave., Chicago, Ill.

**Punches, Portable—**  
Armstrong-Blum Mfg. Co., 109 N. Fran-  
cisco Ave., Chicago, Ill.

Badger State Machine Co., Janesville, Wis.

Schatz Mfg. Co., Chappaqua, N. Y.

**Punches, Portable Metal and Hand—**

W. A. Whitney Mfg. Co., Rockford, Ill.

**Punches, Prick—**

(See Punches, Drive.)

**Punches, R. R. Track—**

Hubbard & Co., Pittsburgh, Pa.

**Punches, Revolving—**

(See Punches, Spring.)

**Punches, Round—**

(See Punches, Drive.)

**Punches, Saw—**

Henry Disston & Sons, Philadelphia, Pa.

Goodell-Pratt Co., Greenfield, Mass.

F. R. Patch Mfg. Co., Rutland, Vt.

**Punches, Screw—**

Badger State Machine Co., Janesville, Wis.

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

Richard Dudgeon, 24-26 Columbia St., N. Y.

A. L. Henderer's Sons, Wilmington, Del.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Schatz Mfg. Co., Chappaqua, N. Y.

**Punches, Spiral Shear—**

Pratt & Whitney Co., Hartford, Ct.

**Punches, Spring—**

Eyelet Tool Co., Boston, Mass.

John H. Graham & Co., 113 Chambers St., New York.

Irrington Mfg. Co., Irvington, N. J.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Louis Sacks, Newark, N. J.

Smith & Egge Mfg. Co., Bridgeport, Ct.

**Punches, Ticket—**

(See Punches, Conductor, Ticket, &c.)

**Punches, Tie Plug—**

Hubbard & Co., Pittsburgh, Pa.

**Punching, Cold—**

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

**Punching Machines, I-Beam—**

Alliance Machine Co., Alliance, O.

Badger State Machine Co., Janesville, Wis.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

E. W. Bliss Co., Brooklyn, N. Y.

Buffalo Forge Co., Buffalo, N. Y.

Cincinnati Punch & Shear Co., Cincinnati, O.

Richard Dudgeon, 24-26 Columbia St., New York.

Ferracute Machine Co., Bridgeton, N. J.

A. L. Henderer's Sons, Wilmington, Del.

Hilles & Jones Co., Wilmington, Del.

Long & Allstatter Co., Hamilton, O.

Macintosh, Hemphill & Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morgan Engineering Co., Alliance, O.

New Doty Mfg. Co., Janesville, Wis.

Niagara Machine & Tool Works, Buffalo, N. Y.

Niles-Bement-Pond Co., 111 Broadway, New York

Schatz Mfg. Co., Chappaqua, N. Y.

Watson-Stillman Co., 50 Church St., Williams, White & Co., Moline, Ill.

**Punching Machines, I-Beam, Hand—**

Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

Badger State Machine Co., Janesville, Wis.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Schatz Mfg. Co., Chappaqua, N. Y.

**Punching, Metal—**

Erdle Perforating Co., Rochester, N. Y.

Grant Mfg. & Machine Co., Bridgeport, Ct.

Harrington & King Perforating Co., 224 No. Union St., Chicago, Ill.

E. Konigslow Stamping & Tool Works, Cleveland, O.

Homer F. Livermore, Boston, Mass.

W. & S. Mfg. Co., Worcester, Mass.

**Punching Presses—**

(See Presses.)

**Purifiers, Feed Water—**

Dodge Mfg. Co., Mishawaka, Ind.

Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.

Harrison Safety Boiler Works, 3194 N. 17th St., Philadelphia, Pa.

Hawley Down Draft Furnace Co., Chicago, Ill.

Benj. F. Kelley & Son, Brooklyn, N. Y.

F. L. Patterson & Co., 26 Cortland St., New York.

Petroleum Iron Works Co., Sharon, Pa.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

Walworth Mfg. Co., Boston, Mass.

Wickes Bros., Saginaw, Mich.

**Purifiers, Gas—**

R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**Purifying and Softening Systems, Water—**

(See Water Softening and Purifying Systems.)

**Purifying Pumps—**

(See Pumps, Elevator Bucket and Purifying.)

**Push Buttons, Carts, Plates—**

(See Buttons, Carts, Plates.)

**Pushers, Car—**

Boston & Lockport Block Co., East Boston, Mass.

W. J. Clark Co., Salem, O.

Hubbard & Co., Pittsburgh, Pa.

Osborn Mfg. Co., Cleveland, O.

Steel Basket Co., Cedar Rapids, Ia.

Webster Mfg. Co., 1075 W. 15th St., Chicago, Ill.

R. Woodman Mfg. & Supply Co., Boston.

**Pushes, Electric Bell—**

W. R. Hartigan, Collinsville, Ct.

Reading Hardware Co., Reading, Pa.

**Putty, Glaziers—**

Hazard Lead Works, Inc., Hazardville, Ct.

Martin-Senour Co., 2514 Quarry St., Chicago, Ill.

**Putty, Stove—**

Cleveland Stone Co., Cleveland, O.

S. Obermayer Co., Cincinnati, O.

**Puzzles, Ring—**

Standard Wire Co., New Castle, Pa.

**Pyrometers—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

Ashton Valve Co., Boston, Mass.

Bristol Co., Waterbury, Ct.  
 Edward Brown & Son, 311½ Walnut St.,  
 Philadelphia, Pa.  
 Eimer & Amend, 205 3d Ave., New York.  
 Charles Engelhard, 32 Cortlandt St., N.Y.  
 Uehling Instrument Co., Passaic, N. J.

#### MERCHANTS

Industrial Supply & Equipment Co., 407  
 Sansom St., Philadelphia, Pa.

**Pyrometers, Indicating—**  
 Bristol Co., Waterbury, Ct.

**Pyrometers, Recording—**  
 Bristol Co., Waterbury, Ct.  
 Edward Brown & Son, 311½ Walnut St.,  
 Philadelphia, Pa.

Uehling Instrument Co., Passaic, N. J.  
**Quadrants, Brass Skylight—**  
 W. & J. Tiebout, 118 Chambers St., N. Y.

**Quarry Bars—**  
 Ingersoll-Rand Co., 11 Broadway, N. Y.  
 Sullivan Machinery Co., Railway Ex-  
 change Bldg., Chicago, Ill.

**Quarry Machinery—**  
 Browning Engineering Co., Cleveland, O.  
 Ingersoll-Rand Co., 11 Broadway, N. Y.  
 Lidgerwood Mfg. Co., 96 Liberty St., N. Y.  
 Sullivan Machinery Co., Railway Ex-  
 change Bldg., Chicago, Ill.

**Quarry Pumps—**  
 (See Pumps, Grouting and Quarry.)  
**Quartering Machines—**  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.

**Quartz Ware, Fused—**  
 Charles Engelhard, 32 Cortlandt St., N. Y.

**Quilts—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Reading Hardware Co., Reading, Pa.  
 Wrightsville Hardware Co., Wrightsville,  
 Pa.

**Rabbit and Butt Gauges—**  
 (See Gauges, Butt and Rabbit.)  
**Rack Cutting Machines, Au-**  
**tomatic—**

Gould & Eberhardt, Newark, N. J.  
 F. E. Reed Co., Worcester, Mass.  
 (See also Cutting Machines, Rack.)

**Racks, Bakery—**  
 Andrews Wire & Iron Works, Rockford,  
 Ill.

Parker Wire Goods Co., Worcester, Mass.  
 Van Dorn Iron Works Co., Cleveland, O.  
 Wire Goods Co., Worcester, Mass.

**Racks, Bars and Rings.**  
**Towel—**

Kilbourne Mfg. Co., Troy, N. Y.  
 Landers, Frary & Clark, New Britain, Ct.  
 Parker Wire Goods Co., Worcester, Mass.  
 Piqua Handle & Mfg. Co., Piqua, O.  
 Raymond Mfg. Co., Cory, Pa.  
 Spencer Wire Co., Worcester, Mass.  
 Taplin Mfg. Co., New Britain, Ct.

**Racks, Bicycle—**  
 (See Stands and Holders, Bicycle.)

**Racks, Blanket and Robe—**  
 John H. Best, Galva, Ill.

**Racks, Brass—**  
 Fawcens Machine Co., Pittsburgh, Pa.  
 New Process Raw Hide Co., Syracuse,  
 N. Y.

W. & J. Tiebout, 118 Chambers St., N. Y.  
**Racks, Card, Book and**  
**Paper—**

Andrews Wire & Iron Works, Rockford,  
 Ill.

Kilbourne Mfg. Co., Troy, N. Y.  
 Parker Wire Goods Co., Worcester, Mass.  
 Wrightsville Hardware Co., Wrightsville,  
 Pa.

**Racks, Clam and Oyster—**  
 Fred J. Meyers Mfg. Co., Hamilton, O.

**Racks, Cut Metal—**  
 Fawcens Machine Co., Pittsburgh, Pa.  
 New Process Raw Hide Co., Syracuse,  
 N. Y.

R. D. Nuttall Co., Pittsburgh, Pa.

**Racks, Envelope—**  
 Wrightsville Hardware Co., Wrightsville,  
 Pa.

**Racks, Filing, Wire—**  
 Estey Wire Works Co., 59 Fulton St.,  
 New York.

**Racks, Hat and Coat—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Kilbourne Mfg. Co., Troy, N. Y.  
 Raymond Mfg. Co., Ltd., Corry, Pa.

**Racks, Hay—**  
 (See Stable Fixtures.)

**Racks, Hose—**  
 Specialty Mfg. Co., St. Anthony Park,  
 Minn.

**Racks, Iron and Steel—**  
 Terrell's Equipment Co., Grand Rapids,  
 Mich.

**Racks, Laundry—**  
 W. J. Clark Co., Salem, O.

**Racks, Milk Bottle—**  
 (See Carriers, Milk Bottle.)

**Racks, Oven—**  
 Philadelphia Steel & Wire Co., 525 Com-  
 merce St., Philadelphia, Pa.

**Racks, Pew, Book—**  
 Ludlow-Saylor Wire Co., St. Louis, Mo.

**Racks, Screen, Wire Cloth—**  
 R. M. Bowser & Son, Renfrew, Pa.

**Racks, Steel, Factory and**  
**Stock Room—**  
 Manufacturing Equipment & Engineering  
 Co., Boston, Mass.

New Britain Machine Co., New Brit-  
 ain, Ct.

**Racks, Steel Goods—**  
 American Fork & Hoe Co., Cleveland, O.  
 (See also Brackets, Shovel, Hoe, Rake,  
 Fork, &c.)

**Racks, Tool—**  
 (See Racks, Steel, Factory and Stock  
 Room.)

**Racks, Towel—**  
 (See Racks, Bars and Rings.)

**Racks, Whip, Revolving—**  
 John H. Best, Galva, Ill.

**Radiator Screens—**  
 (See Screens, Radiator.)

**Radiators, Disc, for Auto-**  
**mobiles—**

Whitlock Coil Pipe Co., Hartford, Ct.

**Radiators, Electric—**  
 General Electric Co., Schenectady, N. Y.

**Radiators, Gas and Oil—**  
 Schneider & Trenkamp Div., Am. Stove  
 Co., Cleveland, O.

**Radiators, Steam and Hot**  
**Water—**

Jarecki Mfg. Co., Erie, Pa.  
 National Tube Co., Pittsburgh, Pa.

**Rafter Brackets, Grapples—**  
 (See Brackets, Grapples.)

**Rafter Hooks—**  
(See Hooks, Overhead Carrying Track.)

**Rail Benders, Bonds—**  
(See Benders, Bonds.)

**Rail, Door and Barn Door—**

Bridgeport Brass Co., 233 B-way, N. Y.  
Chicago Spring Bolt Co., Chicago, Ill.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Griffin Mfg. Co., Erie, Pa.  
Lane Bros. Co., Poughkeepsie, N. Y.  
Lawrence Bros., Sterling, Ill.  
Louden Machinery Co., Fairfield, Ia.  
McKinney Mfg. Co., Allegheny, Pa.  
S. B. Martin, Dalton, O.  
F. E. Myers & Bro., Ashland, O.  
National Mfg. Co., Sterling, Ill.  
Ney Mfg. Co., Canton, O.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., Aurora, Ill.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
Safety Door Hanger Co., Ashland, O.  
Stanley Works, New Britain, Ct.

**Railing and Brackets, Office, Counter, &c—**  
Andrews Wire & Iron Works, Rockford, Ill.

Buffalo Wire Works Co., Buffalo, N. Y.  
Clinton Wire Cloth Co., Clinton, Mass.  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Estey Wire Works Co., 59 Fulton St., New York.

Forest City Steel & Iron Co., Cleveland, O.

Gilbert & Bennett Mfg. Co., 27 Broadway, New York.

Glen Mfg. Co., Ellwood City, Pa.

Howard & Morse, 45 Fulton St., N. Y.

U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.

Ludlow-Saylor Wire Co., St. Louis, Mo.

Fred J. Meyers Mfg. Co., Hamilton, O.

National Iron & Wire Co., Cleveland, O.

Stewart Iron Works Co., Cincinnati, O.

W. S. Tyler Co., Cleveland, O.

Van Dorn Iron Works Co., Cleveland, O.

Wright Wire Co., Worcester, Mass.

**Railings, Altar, Brass or Bronze—**

Buffalo Wire Works Co., Buffalo, N. Y.

W. S. Tyler Co., Cleveland, O.

**Railings, Area—**  
(See Iron Work Builders')

**Railings, Balcony—**  
(See Iron Work Builders')

**Railings, Boat, Ornamental—**

Buffalo Wire Works Co., Buffalo, N. Y.

**Railings, Brass—**  
(See Railing and Brackets.)

**Railings, Bridge—**

Belmont Iron Works, Philadelphia, Pa.

Buffalo Wire Works Co., Inc., Buffalo, N. Y.

Stewart Iron Works Co., Cincinnati, O.

**Railroad Cars, Forging, &c—**  
(See Cars, Forgings, &c.)

**Railroad Equipment—**

Atlas Car & Mfg. Co., Cleveland, O.  
Central Track Supply Co., Springfield, O.  
Arthur Koppel, Pittsburgh, Pa.

Northern Engineering Works, Detroit, Mich.

T. H. Symington Co., Baltimore, Md.

Wellman-Seaver-Morgan Co., Cleveland, O.

Whiting Foundry Equipment Co., Harvey, Ill.

**MERCHANTS.**  
Dallett & Co., Harrison Bldg., Philadelphia, Pa.

Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.

Industrial Supply & Equipment Co., 407 Sansom St., Philadelphia, Pa.

Ernest Law & Co., 15th & Market Sts., Philadelphia, Pa.

Ernst Wiener Co., Church and Fulton Sts., New York.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Richardson & Co., Inc., Pittsburgh, Pa.

Shannon Engineering & Contracting Co., Pittsburgh, Pa.

Wonham & Magor, 29 Broadway, N. Y.

Woodward, Wight & Co., Ltd., New Orleans, La.

**Railroad Equipment, Electric—**

General Electric Co., Schenectady, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Railroad Plates, Tie—**

Lackawanna Steel Co., 2 Rector St., N. Y.

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Railroad Shop Wood Working Machinery—**  
(See Cars, Shop, Wood Working Machinery.)

**Railroad Trucks—**  
(See Trucks, Baggage and Express.)

**Railroad Unloaders—**  
(See Unloaders, Railroad.)

**Railroads, Cable—**  
(See Conveying Machinery.)

**Rails and Hangers, Suspended—**

Ney Mfg. Co., Canton, O.

**Rails, Dash—**

Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

**Rails, Light—**

Atlas Car & Mfg. Co., Cleveland, O.

Carnegie Steel Co., Pittsburgh, Pa.

Jones & Laughlin Steel Co., Pittsburgh, Pa.

Arthur Koppel, Pittsburgh, Pa.

Lackawanna Steel Co., 2 Rector St., N. Y.

Republic Iron & Steel Co., Pittsburgh, Pa.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.

Buell & Mitchell, 120 Liberty St., N. Y.

Robert M. Cumliffe, 11th St. & Washington Ave., Philadelphia, Pa.

J. H. Hillman & Son, Pittsburgh, Pa.

Industrial Supply & Equipment Co., 407 Sansom St., Philadelphia, Pa.

Henry Levis & Co., 26 S. 15th St., Philadelphia, Pa.

North Works, Illinois Steel Co., Chicago, Ill.

F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

Horace T. Potts & Co., 316-320 N. Third St., Philadelphia, Pa.

Richardson & Co., Inc., Pittsburgh, Pa.  
 Robinson & Orr, Pittsburgh, Pa.  
 Shannon Engineering & Contracting Co.,  
 Pittsburgh, Pa.  
 Shook & Fletcher, Birmingham, Ala.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

Wonham & Magor, 29 Broadway, N. Y.

#### **Rails, Old—**

(See Material, Old.)

#### **Rails, Relaying—**

Block-Pollak Iron Co., Cincinnati, O.  
 Thos. P. Conard & Co., Harrison Bldg.,  
 Philadelphia, Pa.  
 Continental Iron & Steel Co., 66 Broad  
 St., New York.  
 Dallett & Co., Harrison Bldg., Phila-  
 delphia, Pa.  
 J. H. Hillman & Son, Pittsburgh, Pa.  
 Cal. Hirsch & Sons Iron & Rail Co.,  
 St. Louis, Mo.  
 Jos. Joseph & Bros. Co., Cincinnati, O.  
 Ernest Law & Co., 15th & Market Sts.,  
 Philadelphia, Pa.  
 Jno. Leonard & Co., 220 Broadway, N. Y.  
 Henry Lewis & Co., 26 So. 15th St., Phil-  
 adelphia, Pa.  
 Edgar M. Moore & Co., Pittsburgh, Pa.  
 F. R. Phillips & Sons Co., Pennsylvania  
 Bldg., Philadelphia, Pa.  
 Richardson & Co., Inc., Pittsburgh, Pa.  
 Robinson & Orr, Pittsburgh, Pa.  
 Shook & Fletcher, Birmingham, Ala.  
 Walsh's Sons & Co., Newark, N. J.  
 Wonham & Magor, 29 Broadway, N. Y.

#### **Rails, Steel—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Arthur Koppel, Pittsburgh, Pa.  
 Lackawanna Steel Co., 2 Rector St., N. Y.  
 Thos. Prosser & Son, 26 Platt St., N. Y.  
 Republic Iron & Steel Co., Pittsburgh,  
 Pa.  
 Tennessee Coal, Iron & Railroad Co., 71  
 Broadway, New York.

#### **MERCHANTS.**

Atlas Car & Mfg. Co., Cleveland, O.  
 Harbour-Stockwell Co., Cambridgeport,  
 Mass.  
 Bourne-Fuller Co., Cleveland, O.  
 Buell & Mitchell, 120 Liberty St., N. Y.  
 Robert M. Cunliffe, 11th St. & Washing-  
 ton Ave., Philadelphia, Pa.  
 Dallett & Co., Harrison Bldg., Phila-  
 delphia, Pa.  
 J. H. Hillman & Son, Pittsburgh, Pa.  
 Cal. Hirsch & Sons Iron & Rail Co.,  
 St. Louis, Mo.  
 C. B. Houston & Co., Girard Trust Bldg.,  
 Philadelphia, Pa.  
 Ernest Law & Co., 15th and Market Sts.,  
 Philadelphia, Pa.  
 Henry Lewis & Co., 26 So. 15th St., Phil-  
 adelphia, Pa.  
 Edgar M. Moore & Co., Pittsburgh, Pa.  
 Edmund W. Mudge & Co., Pittsburgh, Pa.  
 North Works, Illinois Steel Co., Chicago,  
 Ill.  
 F. R. Phillips & Sons Co., Pennsylvania  
 Bldg., Philadelphia, Pa.  
 Pierson & Co., 29 Broadway, New York  
 Richardson & Co., Inc., Pittsburgh, Pa.  
 Robinson & Orr, Pittsburgh, Pa.  
 Joseph T. Ryerson & Son, Chicago, Ill.

Shannon Engineering & Contracting Co.,  
 Pittsburgh, Pa.  
 Walsh's Sons & Co., Newark, N. J.  
 Wheeler, Mifflin & Co., Fidelity Bldg.,  
 Philadelphia, Pa.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Railways for Industrial Purposes—**

Atlas Car & Mfg. Co., Cleveland, O.  
 C. W. Hunt Co., West New Brighton,  
 N. Y.  
 Arthur Koppel, Pittsburgh, Pa.  
 Link-Belt Co., Philadelphia, Pa.  
 F. R. Patch Mfg. Co., Rutland, Vt.  
 Shannon Engineering & Contracting Co.,  
 Pittsburgh, Pa.  
 Ernst Wiener Co., Church and Fulton  
 Sts., New York.

#### **Raisin Seeders—**

(See Seeders, Raisin.)

#### **Rake Machinery—**

(See Fork, Rake and Hoe Machinery.)

#### **Rakes, Asphalt—**

American Fork & Hoe Co., Cleveland, O.

#### **Rakes, Ballast and Gravel—**

American Fork & Hoe Co., Cleveland, O.

#### **Rakes, Garden—**

American Fork & Hoe Co., Cleveland, O.  
 Cronk & Carrier Mfg. Co., Elmira, N. Y.  
 John H. Graham & Co., 113 Chambers  
 St., New York.

F. E. Kohler & Co., Canton, O.  
 Piqua Handle & Mfg. Co., Piqua, O.

#### **Rakes, Hay, Horse—**

Long & Allstatter Co., Hamilton, O.

#### **Rakes, Lawn—**

American Fork & Hoe Co., Cleveland, O.  
 Cronk & Carrier Mfg. Co., Elmira, N. Y.  
 F. E. Kohler & Co., Canton, O.  
 Ney Mfg. Co., Canton, O.  
 Piqua Handle & Mfg. Co., Piqua, O.  
 Richards Mfg. Co., Aurora, Ill.

#### **Rakes, Wood, Hand—**

American Fork & Hoe Co., Cleveland, O.

#### **Hammers, Foundry—**

Chicago Pneumatic Tool Co., Fisher  
 Bldg., Chicago, Ill.

Ingersoll-Rand Co., 11 Broadway, N. Y.

S. Obermayer Co., Cincinnati, O.

Osborn Mfg. Co., Cleveland, O.

J. W. Paxson Co., Philadelphia, Pa.

Louis Sacks Foundry Co., Newark, N. J.

#### **Rams, Hydraulic—**

Barnes Mfg. Co., Mansfield, O.  
 Deming Co., Salem, O.  
 W. & B. Douglass, Middletown, Ct.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Humphreys Mfg. Co., Mansfield, O.  
 F. E. Myers & Bro., Ashland, O.  
 Power Specialty Co., 111 Broadway, N. Y.  
 R. D. Wood & Co., 400 Chestnut St.,  
 Philadelphia, Pa.

#### **Range and Furnace Build- ers' Machinery—**

Excelsior Tool & Machine Co., East St.  
 Louis, Ill.

#### **Ranges, Combination Coal and Gas—**

Schneider & Trenkamp Div., Am. Stove  
 Co., Cleveland, O.

(See also Stoves and Ranges.)

#### **Ranges, Gas—**

Schneider & Trenkamp Div., Am. Stove  
 Co., Cleveland, O.

**Ranges, Steel—**  
Hess-Snyder Co., Massillon, O.  
Schneider & Trenkamp Div., Am. Stove  
Co., Cleveland, O.  
Wm. G. Willard, St. Louis, Mo.

**Rasps and Files—**  
(See Files and Rasps.)

**Rasps, Horse Tooth—**  
Carver File Co., Philadelphia, Pa.  
Henry Disston & Sons, Philadelphia, Pa.  
Heller Bros. Co., Newark, N. J.  
Liveright Bros., Philadelphia, Pa.  
McCaffrey File Co., Philadelphia, Pa.  
Nicholson File Co., Providence, R. I.

**Rat Traps—**  
(See Traps.)

**Ratchet Die Stocks—**  
(See Die Stocks, Ratchet.)

**Ratchet Drills, Pawls—**  
(See Drills, Pawls.)

**Ratchet Screw Drivers—**  
(See Drivers, Screw, Ratchet.)

**Ratchets, Brake, Wagon—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.  
**Ratchets, Drill, Tap.**

**Wrench &c.—**  
Ashcroft Mfg. Co., 85 Liberty St., N. Y.  
Keystone Mfg. Co., Buffalo, N. Y.  
Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Pratt & Whitney Co., Hartford, Ct.  
Walworth Mfg. Co., Boston, Mass.  
Wells Bros. Co., Greenfield, Mass.

**Ratchets, Steamboat—**  
W. W. Patterson Co., Pittsburgh, Pa.

**Ratchets, Universal—**  
Armstrong Bros. Tool Co., 109 N. Fran-  
cisco Ave., Chicago, Ill.

**Ratchets, Wire Fence—**  
(See Stretchers, Fence and Wire.)

**Rattlers, Foundry—**  
(See Barrels, Tumbling.)

**Rawhide Belting, Belt**

**Lacing—**  
(See Belting, Belt Lacing.)

**Rawhide Gears—**(See Gears.)

**Rawhide Pinions—**  
Poole Engineering & Machine Co., Balti-  
more, Md.

**Razor Hones, Stropps—**  
(See Hones, Stropps.)

**Razor Sharpener—**  
(See Dressing, Razor Strop.)

**Razor Strop Hardware—**  
North & Judd Mfg. Co., New Britain, Ct.  
Wire Goods Co., Worcester, Mass.

**Razors—**

Buck Bros., Millbury, Mass.  
Clausse Shear Co., Fremont, O.  
W. H. Compton Shear Co., Newark, N. J.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Adolph Kastor & Bros., 109 Duane St.,  
New York.

Wiebusch & Hilger, Ltd., 106-110 Lafay-  
ette St., New York.

**Razors, Nutmeg—**  
J. S. Dunlap, 215-219 S. Clinton St.,  
Chicago, Ill.

**Razors, Safety—**  
Clausse Shear Co., Fremont, O.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Wiebusch & Hilger, Ltd., 106-110 Lafay-  
ette St., New York.

**Real Estate—**

(See Manufacturing Sites.)

**Real Estate Offices, Porta-  
ble—**

(See Houses, Portable.)

**Reamer Grinders, Holders.**

(See Grinders, Holders, Wrenches.)

**Reamer Handles—**

(See Wrenches, Tap and Reamer.)

**Reamer Stands—**

Skinner Chuck Co., New Britain, Ct.

**Reamers—**

Ashcroft Mfg. Co., 85 Liberty St., N. Y.  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

Buck Bros., Millbury, Mass.  
Butterfield & Co., Derby Line, Vt.

Chicago Pneumatic Tool Co., Fisher  
Bldg., Chicago, Ill.

Cincinnati Electrical Tool Co., Cincin-  
nati, O.

Cleveland Twist Drill Co., Cleveland, O.  
R. M. Clough, Tolland, Ct.

Elmore Tool Mfg. Co., Hartford, Ct.  
Gem Mfg. Co., Pittsburgh, Pa.

J. M. King & Co., Waterford, N. Y.  
Lapointe Machine Tool Co., Hudson, Mass.

Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

H. H. Mayhew Co., Shelburne Falls,  
Mass.

Morse Twist Drill & Machine Co., New  
Bedford, Mass.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Pratt & Whitney Co., Hartford, Ct.  
E. F. Reece Co., Greenfield, Mass.

Standard Tool Co., Cleveland, O.  
Stow Flexible Shaft Co., 26th and Callow-  
hill Sts., Philadelphia, Pa.

James Swan Co., Seymour, Ct.  
Tuck Mfg. Co., Brockton, Mass.

Walworth Mfg. Co., Boston, Mass.  
Western Tool & Mfg. Co., Springfield, O.

Whitman & Barnes Mfg. Co., Chicago.  
Wiley & Russell Mfg. Co., Greenfield,  
Mass.

**Reamers, Adjustable—**

Brown & Sharpe Mfg. Co., Providence,  
R. I.

Butterfield & Co., Derby Line, Vt.  
Cleveland Twist Drill Co., Cleveland, O.

R. M. Clough, Tolland, Ct.  
Lapointe Machine Tool Co., Hudson, Mass.

Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Morse Twist Drill & Machine Co., New  
Bedford, Mass.

Pratt & Whitney Co., Hartford, Ct.  
Standard Tool Co., Cleveland, O.

Wells Bros. Co., Greenfield, Mass.  
Western Tool & Mfg. Co., Springfield, O.

Whitman & Barnes Mfg. Co., Chicago,  
Ill.

**Reamers, Belt—**

Billings & Spencer Co., Hartford, Ct.

**Reamers, Bit Stock Taper—**

(See Reamers.)

**Reamers, Boiler Makers—**

(See Reamers.)

**Reamers, Bridge—**

(See Reamers.)

**Reamers, Burring—**

(See Reamers.)

- Reamers, Center—**  
(See Reamers.)
- Reamers, Expanding—**  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Cleveland Twist Drill Co., Cleveland, O.  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
Whitman & Barnes Mfg. Co., Chicago, Ill.
- Reamers for Turret Lathes—**  
Cleveland Twist Drill Co., Cleveland, O.
- Reamers, Hand—**  
(See Reamers.)
- Reamers, High Speed Steel—**  
Cleveland Twist Drill Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Whitman & Barnes Mfg. Co., Chicago, Ill.
- Reamers, Jobbers'—**  
(See Reamers.)
- Reamers, Locomotive—**  
(See Reamers.)
- Reamers, Oil Feeding—**  
Cleveland Twist Drill Co., Cleveland, O.
- Reamers, Pin—**  
(See Reamers.)
- Reamers, Pipe—**  
(See Taps and Reamers, Pipe.)
- Reamers, Rose Chucking—**  
(See Reamers.)
- Reamers, Rose Shell—**  
(See Reamers.)
- Reamers, Socket—**  
(See Reamers.)
- Reamers, Taper Pin—**  
(See Reamers.)
- Reamers, Three Groove—**  
(See Reamers.)
- Reaming Machines—**  
(See Tapping and Reaming Machines.)
- Receivers, Air—**  
American Welding Co., Carbondale, Pa.  
Bury Compressor Co., Erie, Pa.  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
Clayton Air Compressor Works, 114-118 Liberty St., New York.  
S. Freeman & Sons Mfg. Co., Racine, Wis.  
Ingersoll-Rand Co., 11 Broadway, N. Y.  
R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.  
Petroleum Iron Works Co., Sharon, Pa.  
Riter-Conley Mfg. Co., Pittsburgh, Pa.  
Wm. B. Scalf & Sons Co., Pittsburgh.  
Sullivan Machinery Co., Railway Exchange Bldg., Chicago, Ill.
- Receivers, Gas—**  
American Welding Co., Carbondale, Pa.  
R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.  
Wm. B. Scalf & Sons Co., Pittsburgh.
- Receivers, Telephone—**  
(See Telephone Parts.)
- Receivers, Wireless Operator—**  
Holtzer-Cabot Electric Co., Boston, Mass.
- Reckoning Machines—**  
(See Adding, Computing and Reckoning Machines.)
- Reclaiming Apparatus—**  
Buffalo Foundry & Machine Co., Buffalo, N. Y.
- Recorders, Cash Auto-graph—**  
Hough Cash Recorder Co., Indian Orchard, Mass.
- Recorders, Steam, Speed—**  
(See Indicators, Steam, Speed.)
- Recorders, Time—**  
Howard Time Recorder Co., Boston, Mass.  
Nanz Clock Co., 127 Duane St., N. Y.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.
- Recording Instruments—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Recording Instruments, Temperature—**  
Bristol Co., Waterbury, Ct.  
Edward Brown & Son, 311 Walnut St., Philadelphia, Pa.
- Reducers, Hose—**  
(See Hose Attachments.)
- Reducing Rings, Valves—**  
(See Rings, Valves.)
- Reducing Wire—**  
(See Wire Pointing, &c.)
- Reels, Chalk Line—**  
W. R. Hartigan, Collinsville, Ct.  
Stanley Rule & Level Co., New Britain, Ct.
- Reels, Clothes Line—**  
S. Cheney & Son, Manlius, N. Y.  
John Sommer Faucet Ct., Newark, N. J.
- Reels, Fishing—**  
Andrew B. Hendryx Co., New Haven, Ct.  
John Sommer Faucet Ct., Newark, N. J.
- Reels for Nail Machines—**  
(See Reels, Wire Rod.)
- Reels, Hose—**  
Winship Mfg. Co., Racine, Wis.
- Reels, Sheet Metal—**  
Baird Machine Co., Oakville, Ct.  
Frank Mossberg Co., Attleboro, Mass.
- Reels, Wire, Electric—**  
Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.
- Reels, Wire, for Wire and Textile Machinery—**  
Baird Machine Co., Oakville, Ct.  
Blake & Johnson Co., Waterbury, Ct.  
Morgan Construction Co., Worcester, Mass.  
F. B. Shuster Co., New Haven, Ct.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
Wright Wire Co., Worcester, Mass.
- Reels, Wire Rod—**  
Morgan Construction Co., Worcester, Mass.
- Reels, Yarn—**  
Brown & Sharpe Mfg. Co., Providence, R. I.
- Refining Plants, Oil—**  
Petroleum Iron Works Co., Sharon, Pa.  
Riter-Conley Mfg. Co., Pittsburgh, Pa.
- Reflectors, Lamp—**  
Otto Konigslow Mfg. Co., Cleveland, O.
- Refrigerating Machinery—**  
Vilter Mfg. Co., Milwaukee, Wis.
- Refrigerator Catches, Latches—**  
(See Catches, Latches.)
- Refrigerators and Ice Chests—**  
Maine Mfg. Co., Nashua, N. H.
- Refrigerators, Iceless, Window—**  
Dana Mfg. Co., Cincinnati, O.

**Registers and Ceiling Plates, Stove Pipe—**  
Arcade Mfg. Co., Freeport, Ill.

**Registers and Ventilators—**  
S. Cheney & Son, Manlius, N. Y.

**Registers, Distance—**  
Veeder Mfg. Co., Hartford, Ct.

**Registers, Faces and Borders—**

Buffalo Wire Works Co., Buffalo, N. Y.  
Hart & Cooley Co., New Britain, Ct.  
Hess-Snyder Co., Massillon, O.  
Otto Konigslow Mfg. Co., Cleveland, O.

**Registers, Hand Tally—**  
W. N. Durant Co., Milwaukee, Wis.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Registers, Number—**  
(See Counting Machines.)

**Regulators, Damper—**  
Mason Regulator Co., Boston, Mass.  
Walworth Mfg. Co., Boston, Mass.

**Regulators, Exhaust Pressure—**

Lunkenheimer Co., Cincinnati, O.  
**Regulators, Feed Water—**  
Crosby Steam Gage & Valve Co., Boston.  
Walworth Mfg. Co., Boston, Mass.

**Regulators, Gas—**  
Turner Brass Works, Sycamore, Ill.

**Regulators, Pump, Pressure—**

John H. McGowan Co., Cincinnati, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Regulators, Upholsterers—**  
Tuck Mfg. Co., Brockton, Mass.

**Regulators, Water Pressure—**

Mason Regulator Co., Boston, Mass.

**Regulators, Wind Mill—**  
F. E. Myers & Bro., Ashland, O.

**Reheaters, Compressed Air—**  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

**Reinforced Concrete—**  
Ingersoll-Rand Co., 11 Broadway, N. Y.

**Reinforced Concrete—**  
American Steel & Wire Co., The Rookery, Chicago, Ill.

**General Fireproofing Co., Youngstown, O.**  
Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.

**Reloading Cartridge Tools—**  
(See Tools, Reloading, Cartridge.)

**Removers, Paint and Varnish—**

(See Varnish and Paint Removers.)

**Repair Kits, Cobblers—**  
(See Cobblers' Kits.)

**Repair Links—**  
(See Links, Repair.)

**Repair Materials, Iron Casting—**

Smooth-On Mfg. Co., Jersey City, N. J.

**Re-sawing Machinery—**  
Wickes Bros., Saginaw, Mich.

**Reservoirs, Seamless Drawn Steel for Air Brakes—**

Pressed Steel Tank Co., Milwaukee, Wis.

**Reservoirs, Stove and Range—**  
Jacob J. Vollrath Mfg. Co., Sheboygan, Wis.

**Resistance, Grid, Electric—**  
Electric Controller & Mfg. Co., Cleveland, O.

**Resistance Wire—**  
(See Wires, Electrical.)

**Rests, Ball Turning—**  
American Tool & Machine Co., Boston, Mass.

**Rests, Foot, Shoe Blacking—**  
Chicago Spring Butt Co., Chicago, Ill.

Columbia Grey Iron Co., Columbia, Pa.

Heath Foundry & Mfg. Co., Plymouth, O.

Reading Hardware Co., Reading, Pa.

Louis Sacks, Newark, N. J.

**Rests, Meat, Wire—**  
(See Household Articles, Wire.)

**Rests, Shelf—**  
(See Pins, Shelf.)

**Rests, Shirt, Wire—**  
(See Household Articles, Wire.)

**Rests, Slide—**  
American Tool & Machine Co., Boston, Mass.

J. C. Blount Co., Everett, Mass.

**Retinuing—**  
Avery Stamping Co., Cleveland, O.

**Retorts, Clay, Gas—**  
Cyrus Borgner, 23d St., above Race, Philadelphia, Pa.

Henry Maurer & Son, 42 East 23d St., New York.

**Retorts, Dentists', Chemists', Physicians' &c.—**

Stuart & Peterson Co., Burlington, N. J.

**Retorts, Iron—**  
Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.

**Retorts, Welded Steel—**  
American Welding Co., Carbondale, Pa.

**Revolution Counters—**  
(See Counters, Revolution.)

**Revolvers—**  
(See Pistols and Revolvers.)

**Rheostat Cable—**  
(See Wires, Electrical.)

**Rheostats—**  
Crocker-Wheeler Co., Ampere, N. J.

Electric Controller & Mfg. Co., Cleveland, O.

General Electric Co., Schenectady, N. Y.

Mason Regulator Co., Boston, Mass.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Zuecker & Levett & Loeb Co., 526-530 W. 25th St., New York.

**Ribbon, Sash—**  
Caldwell Mfg. Co., Rochester, N. Y.

**Riddles and Sieves—**  
Buffalo Wire Works Co., Buffalo, N. Y.

Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

Erle Perforating Co., Rochester, N. Y.

Estey Wire Works Co., 59 Fulton St., New York.

Forest City Steel & Iron Co., Cleveland, O.

Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Hanna Engineering Works, 840 Elston Ave., Chicago, Ill.

Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.

Howard & Morse, 45 Fulton St., N. Y.

Ludlow-Saylor Wire Co., St. Louis, Mo.



Fred J. Meyers Mfg. Co., Hamilton, O.  
 Manhattan Perforated Metal Co., 237  
 Centre St., New York.  
 Monarch Engineering & Mfg. Co., Balti-  
 more, Md.  
 Chas. Mundt & Sons, 441-447 Pearl St.,  
 New York.  
 S. Obermayer Co., Cincinnati, O.  
 Osborn Mfg. Co., Cleveland, O.  
 J. W. Paxson Co., Philadelphia, Pa.  
 L. W. Sacks Foundry Co., Newark, N. J.  
 W. J. Tyler Co., Cleveland, O.  
 Western Foundry Supply Co., 50 Church  
 St., New York.  
 Wright Wire Co., Worcester, Mass.

**Ridge Roll—**

(See Ridging, Metal.)

**Ridging, Metal—**

Chattanooga Roofing & Foundry Co.,  
 Chattanooga, Tenn.  
 Empire Iron & Steel Co., Niles, O.  
 Hazelton Sheet Steel Co., Hazelton, Pa.  
 David Lupton's Sons Co., Westmoreland  
 and Janney Sts., Philadelphia, Pa.  
 Merchant & Evans Co., 517 Arch St.,  
 Philadelphia, Pa.  
 Thomas Steel Co., Niles, O.

**Rifflers, Bent—**

Henry Diaston & Sons, Philadelphia, Pa.  
 Nicholson File Co., Providence, R. I.

**Rifles, Carbine, &c.—**

Marlin Fire Arms Co., New Haven, Ct.  
 Remington Arms Co., 313 Broadway, N. Y.  
 J. Stevens Arms & Tool Co., Chicopee  
 Falls, Mass.

**MERCHANTS.**

Cal. Hirsch & Sons Iron & Rail Co., St.  
 Louis, Mo.

**Rifles, Scythe—**

Pike Mfg. Co., Pike, N. H.

**Rifling Machines, Gun Bar-**

rel—  
 Pratt & Whitney Co., Hartford, Ct.

**Rift Saws—**

(See Saws, Rift.)

**Rim Rolling Machines, Au-**

tomobile and Bicycle—  
 Blake & Johnson Co., Waterbury, Ct.

**Rims, Automobile, Motor**

Cycle—  
 American Tube & Stamping Co., Bridge-  
 port, Ct.

Standard Welding Co., Cleveland, O.

**Rims, Bicycle—**

(See Bicycle Parts.)

**Rims, Special Shapes—**

Standard Welding Co., Cleveland, O.

**Ring Bolts, Gauges —**

(See Bolts, Gauges.)

**Ring Machines, Wire—**

Blake & Johnson Co., Waterbury, Ct.  
 W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
 Chas. Leffler & Co., Brooklyn, N. Y.  
 F. B. Shuster Co., New Haven, Ct.

**Ring Winding, Cutting and**

Welding Machinery—  
 Turner, Vaughan & Taylor Co., Cuyahoga  
 Falls, O.

**Rings and Ringers, Hog—**

F. P. Smith & Co., Sharon Hill, Pa.

**Rings, Box, Curtain and**

Shade—  
 Hobbs Mfg. Co., Worcester, Mass.  
 Turner & Stanton Co., Norwich, Ct.

**Rings, Brass—**

Standard Welding Co., Cleveland, O.  
 W. & J. Tiebout, 118 Chambers St., N. Y.

**Rings, Bridle, Brass, Gal-**

vanized and Enameled—  
 M. S. Brooks & Sons, Chester, Ct.  
 Hobbs Mfg. Co., Worcester, Mass.

**Rings, Bridle, Electrical—**

Diamond Expansion Bolt Co., 90 West  
 St., New York.

Star Expansion Bolt Co., 147-149 Cedar  
 St., New York.

**Rings, Bronze, Copper,**

Fiber, Lead—  
 U. S. Indestructible Gasket Co., 50  
 Church St., New York.

**Rings, Bull—**

Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.

Seymour, Smith & Son, Oakville, Ct.

**Rings, Clinch—**

Wm. H. Haskell Mfg. Co., Pawtucket,  
 R. I.

Thomas Laughlin Co., Portland, Me.  
 Rhode Island Tool Co., Providence, R. I.

Wilcox, Crittenden & Co., Inc., Middle-  
 town, Ct.

**Rings, Curtain Pole—**

Piqua Handle & Mfg. Co., Piqua, O.

**Rings, Flue—**

Western Foundry & Sash Weight Co., St.  
 Louis, Mo.

Western Foundry & Sash Weight Co., 2d  
 and Miller Sts., St. Louis, Mo.

**Rings, Flush—**

Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.

Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 91-98 Lafayette  
 St., New York.

W. & J. Tiebout, 118 Chambers St., N. Y.

**Rings, Fruit Jar—**

New York Belting & Packing Co., 91-93  
 Chambers St., New York.

**Rings, Harness—**

North & Judd Mfg. Co., New Britain, Ct.

**Rings, Hitching—**

M. Lanz & Sons, Pittsburgh, Pa.  
 New Castle Forge & Bolt Co., New  
 Castle, Pa.

Ney Mfg. Co., Canton, O.  
 Parker Wire Goods Co., Worcester, Mass.

Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.

W. & J. Tiebout, 118 Chambers St., N. Y.  
 Wire Goods Co., Worcester, Mass.

**Rings, Insulated Distrib-**

ing—  
 Star Expansion Bolt Co., 147-149 Cedar  
 St., New York.

**Rings, Iron—**

Thomas Laughlin Co., Portland, Me.  
 New Castle Forge & Bolt Co., New  
 Castle, Pa.

Standard Chain Co., Pittsburgh, Pa.  
 Standard Welding Co., Cleveland, O.

Wilcox, Crittenden & Co., Inc., Middle-  
 town, Ct.

**Rings, Key—**

Arade Mfg. Co., Freeport, Ill.  
 Billings & Spencer Co., Hartford, Ct.

**Rings, Lap or Open—**

New Castle Forge & Bolt Co., New  
 Castle, Pa.  
 Standard Chain Co., Pittsburgh, Pa.

(See also Links, Repair.)

**Rings, Malleable Iron—**  
Thomas Laughlin Co., Portland, Me.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

**Rings, Martingale—**  
Piqua Handle & Mfg. Co., Piqua, O.  
**Rings, Napkin, Silver and**  
**Silver Plated—**  
International Silver Co., Meriden, Ct.

**Rings on Plates—**  
Thomas Laughlin Co., Portland, Me.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

**Rings, Passepartout—**  
Turner & Stanton Co., Norwich, Ct.

**Rings, Pile—**  
M. Lanz & Sons, Pittsburgh, Pa.

**Rings, Pole—**  
(See Telegraph and Telephone Pole Sup-  
plies.)

**Rings, Reducing, Griddle**  
**Hole—**

S. Cheney & Son, Manlius, N. Y.

**Rings, Rock Crusher—**  
Chrome Steel Works, Chrome, N. J.

**Rings, Rubber—**  
(See Gaskets and Rings, Rubber.)

**Rings, Saddlery—**  
Hobbs Mfg. Co., Worcester, Mass.  
North & Judd Mfg. Co., New Britain, Ct.

**Rings, Steel—**  
New Castle Forge & Bolt Co., New  
Castle, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.  
J. H. Sessions & Son, Bristol, Ct.  
Standard Welding Co., Cleveland, O.

**Rings, Telephone Distribut-**  
**ing—**  
(See Rings, Bridal, Electrical.)

**Rings, Tool Post—**  
Page-Storms Drop Forge Co., Chicopee,  
Mass.

**Rings, Towel—**  
(See Racks, Bars and Rings.)

**Rings, Welded Steel—**  
American Welding Co., Carbondale, Pa.

**Rings, Wire—**  
Hobbs Mfg. Co., Worcester, Mass.  
Spencer Wire Co., Worcester, Mass.  
Standard Welding Co., Cleveland, O.

**Rings, Wire, D and Round—**  
R. C. Jenkinson & Co., Newark, N. J.

**Rings, Wrought Iron—**  
Thomas Laughlin Co., Portland, Me.  
Millersburg Fifth Wheel Co., Millersburg,  
Pa.

New Castle Forge & Bolt Co., New  
Castle, Pa.  
Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

**Rings, Wrought Steel—**  
Millersburg Fifth Wheel Co., Millersburg,  
Pa.

New Castle Forge & Bolt Co., New  
Castle, Pa.

Pennsylvania Forge Co., Philadelphia, Pa.  
A. P. Witteman & Co., 1223 Spring St.,  
Philadelphia, Pa.

**Rip Saws—**  
(See Saws, Hand, &c.)

**Rivet Clippers, Headers,**  
**Rods—** (See Clippers, Headers, Rods)

**Rivet Cutters—**  
(See Cutters, Rivet.)

**Rivet Drilling Machines—**  
F. B. Shuster Co., New Haven, Ct.

**Rivet Hold-Ons, Pneu-**  
**matic—**  
Helwig Mfg. Co., St. Paul, Minn.

**Rivet Iron—**  
(See Iron, Rivet.)

**Rivet Machinery—**  
Acme Machinery Co., Cleveland, O.  
Blake & Johnson Co., Waterbury, Ct.  
E. J. Manville Mach. Co., Waterbury, Ct.  
National Machinery Co., Tiffin, O.  
Waterbury Farrel Foundry & Machine  
Co., Waterbury, Ct.

**Rivet Sets, Tongs—**  
(See Sets, Tongs.)

**Rivet Setting Machinery—**  
Judson L. Thomson Mfg. Co., Waltham,  
Mass.

**Rivet Wire—** (See Wire, Rivet.)

**Riveted Pipe Plants—**  
(See Pipe Plants, Riveted.)

**Riveted Work—**  
(See Buildings and Bridges.)

**Riveters and Riveting Ma-**  
**chines for Tubular and**  
**Bifurcated Rivets—**

Arcade Mfg. Co., Freeport, Ill.  
F. H. Smith Mfg. Co., 18-30 W. Randolph  
St., Chicago, Ill.

Judson L. Thomson Mfg. Co., Waltham,  
Mass.

Tubular Rivet & Stud Co., Boston, Mass.

**Riveters, Bicycle Chain—**  
Grant Mfg. & Machine Co., Bridgeport, Ct.  
McCabe Hanger Mfg. Co., 425-427 W. 25th  
St., New York.

F. B. Shuster Co., New Haven, Ct.

**Riveters, Hand—**  
Chicago Pneumatic Tool Co., Fisher  
Bldg., Chicago, Ill.

Heath Foundry & Mfg. Co., Plymouth, O.  
F. H. Smith Mfg. Co., 18-30 W. Randolph  
St., Chicago, Ill.

Judson L. Thomson Mfg. Co., Waltham,  
Mass.

**Riveters, Hydraulic—**  
Alliance Machine Co., Alliance, O.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Chambersburg Engineering Co., Chambers-  
burg, Pa.

Mackintosh, Hemphill & Co., Pittsburgh  
Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway  
New York.

Watson-Stillman Co., 50 Church St.,  
New York.

Wickes Bros., Saginaw, Mich.  
R. D. Wood & Co., 400 Chestnut St.  
Philadelphia, Pa.

**MERCHANTS.**  
Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.  
Scully Steel & Iron Co., Halsted and  
Wayman Sts., Chicago, Ill.

**Riveters, Hydraulic Porta-**  
**ble—**

Alliance Machine Co., Alliance, O.  
Chambersburg Engineering Co., Cham-  
bersburg, Pa.

Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Riveters, Hydro-Pneumatic—**

Hanna Engineering Works, 840 Elston Ave., Chicago, Ill.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Pawling & Harnischfeger, Milwaukee, Wis.  
 Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

**Riveters, Pneumatic—**

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
 Clayton Air Compressor Works, 114-118 Liberty St., New York.  
 Hanna Engineering Works, 840 Elston Ave., Chicago, Ill.  
 Helwig Mfg. Co., St. Paul, Minn.  
 Ingersoll-Rand Co., 11 Broadway, N. Y.  
 Pittsburgh Pneumatic Co., Canton, O.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

**Riveters, Portable—**

Alliance Machine Co., Alliance, O.  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
 Hanna Engineering Works, 840 Elston Ave., Chicago, Ill.  
 Morgan Engineering Co., Alliance, O.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.  
 Wickes Bros., Saginaw, Mich.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

**MERCHANTS.**

Industrial Supply & Equipment Co., 407 Sansom St., Philadelphia, Pa.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

**Riveters, Steam—**

Alliance Machine Co., Alliance, O.  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Chambersburg Engineering Co., Chambersburg, Pa.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Morgan Engineering Co., Alliance, O.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Wickes Bros., Saginaw, Mich.

**Riveting Burrs—**

(See Burrs, Steel.)

**Riveting Machinery—**

Adriance Machine Works, Brooklyn, N. Y.  
 Alliance Machine Co., Alliance, O.  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Chambersburg Engineering Co., Chambersburg, Pa.  
 Cleveland Punch & Shear Works Co., Cleveland, O.  
 Consolidated Press & Tool Co., Hastings, Mich.  
 Ferracute Machine Co., Bridgeton, N. J.  
 Garvin Machine Co., Spring & Varick Sts., New York.  
 Grant Mfg. & Machine Co., Bridgeport, Ct.  
 Hanna Engineering Works, 840 Elston Ave., Chicago, Ill.  
 W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
 Hilles & Jones Co., Wilmington, Del.  
 Harvey Hubbell, Bridgeport, Ct.  
 Long & Allstatter Co., Hamilton, O.  
 Morgan Engineering Co., Alliance, O.  
 New Doty Mfg. Co., Janesville, Wis.  
 Niagara Machine & Tool Works, Buffalo, N. Y.  
 Niles-Bement-Pond Co., 111 Broadway, New York.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 F. B. Shuster Co., New Haven, Ct.  
 Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.  
 Fred J. Swaine Co., St. Louis, Mo.  
 Judson L. Thomson Mfg. Co., Waltham, Mass.  
 Watson-Stillman Co., 50 Church St., N. Y.  
 Wickes Bros., Saginaw, Mich.  
 Williams, White & Co., Moline, Ill.  
 R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.

Zeh &amp; Hahnemann Co., Newark, N. J.

**MERCHANTS.**

Industrial Supply & Equipment Co., 407 Sansom St., Philadelphia, Pa.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.  
 A. D. White Machinery Co., 27-31 S. Jefferson St., Chicago, Ill.

**Rivets, Aluminum—**

John Hassall, Brooklyn, N. Y.

**Rivets and Burrs, Brass—**

Plume and Atwood Mfg. Co., Waterbury, Ct.

**Rivets and Burrs, Copper—**

Blake & Johnson Co., Waterbury, Ct.  
 Bridgeport Brass Co., 23 R'way, N. Y.  
 U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.  
 Plume & Atwood Mfg. Co., Waterbury, Ct.

C. C. &amp; E. P. Townsend Co., New Brighton, Pa.

Waterbury Brass Co., Waterbury, Ct.

**MERCHANTS.**

Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.

**Rivets, Automobile Tire—**

Judson L. Thomson Mfg. Co., Waltham, Mass.

Tubular Rivet & Stud Co., Boston, Mass.

**Rivets, Belt—**

(See Rivets, Iron, Small Miscellaneous.)

**Rivets, Bifurcated—**

Crescent Belt Fastener Co., Inc., 143 E. 23d St., New York.

Judson L. Thomson Mfg. Co., Waltham, Mass.

Tubular Rivet & Stud Co., Boston, Mass.

**Rivets, Bolt—**

Blake & Johnson Co., Waterbury, Ct.

Fort Pitt Forge Co., Pittsburgh, Pa.

U. T. Hungerford Brass & Copper Co.,

497-505 Pearl St., New York.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**Rivets, Boiler and Structures—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Atlas Car & Mfg. Co., Cleveland, O.

Bethlehem Steel Co., South Bethlehem, Pa.

Burden Iron Co., Troy, N. Y.

Forest City Steel & Iron Co., Cleveland, O.

Fort Pitt Forge Co., Pittsburgh, Pa.

Jones & Laughlin Steel Co., Pittsburgh, Pa.

M. Lanz & Sons, Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

Pittsburgh Mfg. Co., Pittsburgh, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

Upson Nut Co., Cleveland, O.

**Rivets, Brass—**

Blake & Johnson Co., Waterbury, Ct.

Cobb & Drew, Inc., Plymouth, Mass.

Grand Crossing Tack Co., Grand Crossing, Ill.

John Hassall, Brooklyn, N. Y.

U. T. Hungerford Brass & Copper Co.,

497-505 Pearl St., New York.

Homer F. Livermore, Boston, Mass.

Progressive Mfg. Co., Torrington, Ct.

Reed & Prince Mfg. Co., Worcester, Mass.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Arthur T. Rutter & Co., 256 Broadway, New York.

Judson L. Thomson Mfg. Co., Waltham, Mass.

C. C. & E. P. Townsend Co., New Brighton, Pa.

Tubular Rivet & Stud Co., Boston, Mass.

**Rivets, Braziers—**

Blake & Johnson Co., Waterbury, Ct.

U. T. Hungerford Brass & Copper Co.,

497-505 Pearl St., New York.

Scovill Mfg. Co., Waterbury, Ct.

**Rivets, Clinch—**

Grand Crossing Tack Co., Grand Crossing, Ill.

Judson L. Thomson Mfg. Co., Waltham, Mass.

Tubular Rivet & Stud Co., Boston, Mass.

**Rivets, Coopers—**

(See Rivets, Iron, Small Miscellaneous.)

**Rivets, Copper—**

Progressive Mfg. Co., Torrington, Ct.

(See also Rivets and Burrs, Copper.)

**Rivets, Copper-Smiths—**

Blake & Johnson Co., Waterbury, Ct.

John Hassall, Brooklyn, N. Y.

U. T. Hungerford Brass & Copper Co.,

497-505 Pearl St., New York.

Waterbury Brass Co., Waterbury, Ct.

**Rivets, Galvanized—**

Garland Nut & Rivet Co., Pittsburgh, Pa.

Thomas Laughlin Co., Portland, Me.

New Castle Forge & Bolt Co., New Castle, Pa.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

C. C. & E. P. Townsend Co., New Brighton, Pa.

Wilcox, Crutenden & Co., Inc., Middletown, Ct.

**Rivets, German Silver—**

John Hassall, Brooklyn, N. Y.

Judson L. Thomson Mfg. Co., Waltham, Mass.

Tubular Rivet & Stud Co., Boston, Mass.

**Rivets, German Silver Steel—**

Progressive Mfg. Co., Torrington, Ct.

**Rivets, Hinge—**

Blake & Johnson Co., Waterbury, Ct.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Grand Crossing Tack Co., Grand Crossing, Ill.

C. C. & E. P. Townsend Co., New Brighton, Pa.

**Rivets, Iron, Small Miscellaneous—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

American Screw Co., Providence, R. I.

Atlas Bolt & Screw Co., Cleveland, O.

Bethlehem Steel Co., So. Bethlehem, Pa.

Clark Bros. Bolt Co., Milldale, Ct.

Cobb & Drew, Inc., Plymouth, Mass.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Garland Nut & Rivet Co., Pittsburgh, Pa.

Grand Crossing Tack Co., Grand Crossing, Ill.

John Hassall, Brooklyn, N. Y.

Ireland & Matthews Mfg. Co., Detroit, Mich.

R. C. Jenkinson & Co., Newark, N. J.

Milwaukee Tack Co., Milwaukee, Wis.

Oliver Iron & Steel Co., Pittsburgh, Pa.

Progressive Mfg. Co., Torrington, Ct.

Reed & Prince Mfg. Co., Worcester, Mass.

Russell, Burdall & Ward Bolt & Nut Co., Portchester, N. Y.

J. H. Sessions & Son, Bristol, Ct.

Tower Mfg. Co., Cincinnati, O.

C. C. & E. P. Townsend Co., New Brighton, Pa.

**Rivets, Oyster Tong—**

W. & J. Tiebout, 118 Chambers St., N. Y.

**Rivets, Platinum—**

Baker & Co., Inc., Newark, N. J.

**Rivets, Sheet Iron—**

(See Rivets, Iron, Small Miscellaneous.)

**Rivets, Ship—**

Fort Pitt Forge Co., Pittsburgh, Pa.

**Rivets, Small Bright, to Order—**

Blake & Johnson Co., Waterbury, Ct.  
John Hassall, Brooklyn, N. Y.

**Rivets, Small, Special, to Order—**

Reed & Prince Mfg. Co., Worcester, Mass.

**Rivets, Special—**

H. C. Cook & Co., Ansonia, Ct.  
Russell, Burdsall & Ward, Boit & Nut Co., Port Chester, N. Y.

**Rivets, Steel—**

J. H. Sessions & Son, Bristol, Ct.

**Rivets, Tank—**

(See Rivets, Iron, Small Miscellaneous.)

**Rivets, Tinned—**

Tower Mfg. Co., Cincinnati, O.  
Tubular Rivet & Stud Co., Boston, Mass.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Rivets, Tinnings—**

(See Rivets, Iron, Small Miscellaneous.)

**Rivets, Tire, Malleable**

Burs—  
Oliver Iron & Steel Co., Pittsburgh, Pa.

**Rivets, Tubular—**

Judson L. Thomson Mfg. Co., Waltham, Mass.

Tubular Rivet & Stud Co., Boston, Mass.

**Rivets, Wagon—**

(See Rivets, Iron, Small Miscellaneous.)

**Road Rollers, Scrapers—**

(See Rollers, Scrapers.)

**Roasters, Coffee—**

Stuart & Peterson Co., Burlington, N. J.

**Roasters, Meat—**

(See Pans, Baking and Roasting.)

**Roasters, Peanut—**

Stuart & Peterson Co., Burlington, N. J.

**Rock Face Stone—**

(See Ceiling and Siding, Iron and Steel.)

**Rocker Springs—**

(See Springs, Rocker.)

**Rod Cutters, Headers—**

(See Cutters, Headers.)

**Rod Ends—**

Billings & Spencer Co., Hartford, Ct.

**Rod Mill Machinery—**

Morgan Construction Co., Worcester, Mass.

Philadelphia Roll & Machine Co., 23d St.

& Washington Ave., Philadelphia, Pa.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Rod Reels, Wire—**

(See Reels, Wire Rod.)

**Rod Tapering Mills—**

(See Mills, Rod Tapering.)

**Rods, Aluminum—**

Seville Mfg. Co., Waterbury, Ct.

**Rods, Anchor, Bridge, &c.—**

Fitzsimons Co., Youngstown, O.

M. Lanz & Son, Pittsburgh, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Pawtucket Mfg. Co., Pawtucket, R. I.

**Rods, Awning—**

Forest City Steel & Iron Co., Cleveland, O.

**Rods, Bessemer, Coppered—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
Youngstown Sheet & Tube Co., Youngstown, O.

**Rods, Black Steel—**

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**Rods, Brass, Copper—**

(See Brass and Copper Rods.)

**Rods, Bronze—**

Charles H. Besly & Co., 15-21 S. Clinton

St., Chicago, Ill.

Bridgeport Brass Co., 253 B'way, N. Y.

Phosphor-Bronze Smelting Co., 3200 Wash-

ington Ave., Philadelphia, Pa.

Paul S. Reeves & Son, 415 Catharine

St., Philadelphia, Pa.

Riverside Metal Co., Riverside, N. J.

Arthur T. Rutter & Co., 256 Broadway,

New York.

Seville Mfg. Co., Waterbury, Ct.

Seymour Mfg. Co., Seymour, Ct.

Waterbury Brass Co., Waterbury, Ct.

**Rods, Chair—**

Reed & Prince Mfg. Co., Worcester,

Mass.

**Rods, Conduct—**

Diamond Expansion Bolt Co., 90 West

St., New York.

**Rods, Connecting—**

Allegheny Forging Co., Pittsburgh, Pa.

Bancroft & Co., Philadelphia, Pa.

Cleveland City Forge & Iron Co., Cleve-

land, O.

National Bolt & Nut Co., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

Richmond Forgings Corporation, Rich-

mond, Va.

Sundberg, Kropp & Co., 1121-1131 W.

21st St., Chicago, Ill.

Tindel-Morris Co., Eddystone, Pa.

**Rods, Coppered Steel—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Patriarche & Bell, 215 Pearl St., N. Y.

**Rods, Curtain—**

Ludlow-Saylor Wire Co., St. Louis, Mo.

Parker Wire Goods Co., Worcester, Mass.

Philadelphia Steel & Wire Co., 525 Com-

merce St., Philadelphia, Pa.

Spencer Wire Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

**Rods, Dental Octagon—**

Kidd Bros. & Burgher Steel Wire Co.,

Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca,

Pa.

**Rods, Dock—**

National Bolt & Nut Co., Pittsburgh, Pa.

**Rods, Dowel—**

Kidd Bros. & Burgher Steel Wire Co.,

Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca,

Pa.

**Rods, Drill, Carbon—**

Spencer Wire Co., Worcester, Mass.

**Rods, Drill, High Speed—**

Spencer Wire Co., Worcester, Mass.

**Rods, Extension—**

Turner & Stanton Co., Norwich, Ct.

**Rods, Eye—**

National Bolt & Nut Co., Pittsburgh, Pa.

**Rods, Fishing—**

Clark-Horrocks Co., Utica, N. Y.  
Dame, Stoddard & Co., Boston, Mass.

**Rods, Fishing, Steel—**

Horton Mfg. Co., Bristol, Ct.  
Union Hardware Company, Torrington, Ct.

**Rods for Concrete Structures—**

(See Bars for Concrete Structures.)

**Rods, Gauging and Wrought-  
age, &c.—**

Chapin-Stephens Co., Pine Meadow, Ct.  
Stanley Rule & Level Co., New Britain, Ct.

Upson Nut Co., Cleveland, O.

**Rods, German Silver—**

Bridgeport Brass Co., 253 B'way, N. Y.  
Iverside Metal Co., Riverside, N. J.  
Arthur T. Rutter & Co., 256 Broadway, New York

Scoville Mfg. Co., Waterbury, Ct.

Seymour Mfg. Co., Seymour, Ct.

Waterbury Brass Co., Waterbury, Ct.

**Rods, Gun and Rifle Clean-**

ing—

W. R. Hartigan, Collinsville, Ct.  
Reversible Tube Cleaner Co., Worcester, Mass.

J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

**Rods, Gun Screw—**

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**Rods, Guy—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Iron & Steel Mfg. Co., Lebanon, Pa.

M. Lanz & Sons, Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Rods, High Speed Drill—**

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

**Rods, Hitching Post—**

(See Hitching Post Rods.)

**Rods, Key—**

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Fitzsimons Co., Youngstown, O.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**Rods, Leveling—**

Keuffel & Esser Co., 127 Fulton St., N. Y.

**Rods, Lightning—**

(See Lightning Rods.)

**Rods, Miter—**

National Saw Co., Newark, N. J.

**Rods, Nail and Rivet—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

**Rods, Nail Set—**

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**Rods, Parasol, Baby Car-**

riage—

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

**Rods, Piston—**

Allegheny Forging Co., Pittsburgh, Pa.  
Bancroft & Co., Philadelphia, Pa.

Cleveland City Forge & Iron Co., Cleveland, O.

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Fitzsimons Co., Youngstown, O.

U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.

B. M. Jones & Co., Inc., Boston, Mass.

Jones & Laughlin Steel Co., Pittsburgh.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.

Paul S. Reeves & Son, 14-15 Catharine St., Philadelphia, Pa.

**Rods, Polished Drill—**

Fitzsimons Co., Youngstown, O.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

**Rods, Pump—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Fitzsimons Co., Youngstown, O.

Keystone Driller Co., Beaver Falls, Pa.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.

Paul S. Reeves & Son, 14-15 Catharine St., Philadelphia, Pa.

**Rods, Resistance, Electric—**

Thomas Prosser & Son, 26 Platt St., N. Y.

**Rods, Rivet—**

Carnegie Steel Co., Pittsburgh, Pa.

**Rods, Roller Bearing—**

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**Rods, Roof—**

(See Rods, Anchor, Bridge, &c.)

**Rods, Saw—**

E. C. Atkins & Co., Indianapolis, Ind.

Geo. H. Bishop & Co., Cincinnati, O.

Henry Disston & Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.

Charles Parker Co., Meriden, Ct.

Simonds Mfg. Co., Fitchburg, Mass.

**Rods, Screw—**

American Steel & Wire Co., The Rookery, Chicago, Ill.

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Fitzsimons Co., Youngstown, O.

**Rods, Steel Drill—**

Fitzsimons Co., Youngstown, O.  
Hobson, Houghton & Co., Ltd., 21 Cliff St., New York.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.  
Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**Rods, Stove, Range and Furnace—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Screw Co., Providence, R. I.  
Atlas Bolt & Screw Co., Cleveland, O.  
Ireland & Matthews Mfg. Co., Detroit, Mich.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
Reed & Prince Mfg. Co., Worcester, Mass.

**Rods, Tap and Reamer—**

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.  
Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**Rods, Tie—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Bridge Co. of New York, 30 Church St., New York.

American Iron & Steel Mfg. Co., Lebanon, Pa.  
Berlin Construction Co., Berlin, Ct.

Cleveland City Forge & Iron Co., Cleveland, O.  
Fitzsimons Co., Youngstown, O.

Port Pitt Forge Co., Pittsburgh, Pa.  
Graham Nut Co., Pittsburgh, Pa.

Samuel Hall's Sons, 223-233 W. 10th St., New York.

W. N. Kratzer & Co., Pittsburgh, Pa.  
Matthew Lanz & Sons, Pittsburgh, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.  
Pittsburgh Mfg. Co., Pittsburgh, Pa.

**Rods, Towel, Range—**

ArCADE Mfg. Co., Freeport, Ill.

**Rods, Truss—**

(See Rods, Anchor, Bridge, &c.)

**Rods, Typewriter—**

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.  
Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**Rods, Upset—**

Allegheny Forging Co., Pittsburgh, Pa.  
American Bridge Co. of New York, 30 Church St., New York.

American Iron & Steel Mfg. Co., Lebanon, Pa.  
Cleveland City Forge & Iron Co., Cleveland, O.

Fort Pitt Forge Co., Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.  
Pittsburgh Mfg. Co., Pittsburgh, Pa.

**Rods, Ventilator—**

(See Ventilator, Controlling Rods.)

**Rods, Wagon Box—**

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Rods, Wire—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Lumbia Steel & Shafting Co., Pittsburgh, Pa.

Grand Crossing Tack Co., Grand Crossing, Ill.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Morgan Spring Co., Worcester, Mass.  
Pittsburgh Steel Co., Pittsburgh, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

S. & C. Wardlow, 278 Pearl St., N. Y.  
Washburn Wire Co., Phillipsdale, R. I.

Wickwire Bros., Cortland, N. Y.  
Youngstown Sheet & Tube Co., Youngstown, O.

**Roll Brass, Bronze, Copper—**

(See Brass, Bronze, Copper.)

**Roll Shells—**

(See Shells, Roll.)

**Roll Shells, Crushing—**

Thomas Prosser & Son, 26 Platt St., N. Y.  
Taylor Iron & Steel Co., High Bridge, N. J.

**Roll Turners' Tools—**

Heppenstall Forge & Knife Co., Pittsburgh, Pa.

**Roller Bearings, Stays—**

(See Bearings, Skates, Stays.)

**Roller Bearing Steel—**

(See Steel, Roller Bearing.)

**Roller Leveling Machines for Sheets—**

Bertsch & Co., Cambridge City, Ind.

**Rollers, Bogie—**

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

**Rollers, Caster—**

(See Wheels, Caster, Wooden.)

**Rollers, Door—**

S. Cheney & Son, Manlius, N. Y.

**Rollers, Flue, Pneumatic—**

Reading Hardware Co., Reading, Pa.

**Rollers, Gate, Garden—**

Helwig Mfg. Co., St. Paul, Minn.

**Rollers, Golf—**

R. W. Whitehurst Co., Norfolk, Va.

**Rollers, Guide—**

(See Fire Door and Shutter Hardware.)

**Rollers, Land and Field—**

Keystone Farm Machine Co., York, Pa.

**Rollers, Lawn and Golf—**

R. W. Whitehurst Co., Norfolk, Va.

**Rollers, Paperhangers—**

R. W. Whitehurst Co., Norfolk, Va.

**Rollers, Polo and Tennis—**

Webster & Perks Tool Co., Springfield, O.

**Rollers, Road—**

R. W. Whitehurst Co., Norfolk, Va.

**Rollers, Sash—**

Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.

**Rollers, Skate—**

R. W. Whitehurst Co., Norfolk, Va.

**Rollers, Snow—**

Ney Mfg. Co., Canton, O.

**Rollers, Stow & Wilcox Co., 27 Murray St., New York.****Rollers, Sash—**

Reading Hardware Co., Reading, Pa.

**Rollers, Skate—**

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Rollers, Snow—**

W. & J. Tiebout, 118 Chambers St., N. Y.

**Rollers, Skate—**

(See Wheels, Roller Skate.)

**Rollers, Snow—**

Falls Rivet & Machine Co., Cuyahoga Falls, O.

**Rollers. Stay—**

Crank & Carrier Mfg. Co., Elmira, N. Y.  
Griffin Mfg. Co., Erie, Pa.  
Lane Bros. Co., Poughkeepsie, N. Y.  
Lawrence Bros. Sterling, Ill.  
Louden Machinery Co., Fairfield, Ia.  
McKinney Mfg. Co., Allegheny, Pa.  
F. E. Myers & Bro., Ashland, O.  
National Mfg. Co., Sterling, Ill.  
Ney Mfg. Co., Canton, O.  
Reading Hardware Co., Reading, Pa.  
Richards Mfg. Co., Aurora, Ill.

**Rollers. Street—**

(See Rollers, Road.)

**Rollers. Towel—**

Arcade Mfg. Co., Freeport, Ill.

**Rollers. Trunk—**

J. H. Sessions & Son, Bristol, Ct.

**Rolling Machinery. Hoe—**

Birmingham Iron Foundry, Derby, Ct.

**Rolling Mill Gauges—**

(See Gauges, Rolling Mill.)

**Rolling Mill Machinery—**

Alliance Machine Co., Alliance, O.  
Atlas Car & Mfg. Co., Cleveland, O.  
Bertsch & Co., Cambridge City, Ind.  
Birdsboro Steel Foundry & Machine Co.,  
Birdsboro, Pa.  
Birmingham Iron Foundry, Derby, Ct.  
Blake & Johnson Co., Waterbury, Ct.  
Cincinnati Punch & Shear Co., Cincinnati, O.  
Crocker-Wheeler Co., Ampere, N. J.  
Farrel Foundry & Machine Co., Ansonia, Ct.  
Fawcus Machine Co., Pittsburgh, Pa.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
Hilles & Jones Co., Wilmington, Del.  
Hyde Park Foundry & Machine Co.,  
Hyde Park, Pa.  
Lewis Foundry & Machine Co., Groveton, Pa.  
Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Mesta Machine Co., Pittsburgh, Pa.  
Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.  
R. S. Newbold & Son Co., Norristown, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

George A. Ohl & Co., Newark, N. J.  
Pennsylvania Engineering Works, New Castle, Pa.

Philadelphia Roll & Machine Co., 23d St., & Washington Ave., Philadelphia.

Foole Engineering & Machine Co., Baltimore, Md.  
Thomas Prosser & Son, 26 Platt St., N.Y.

Standard Engineering Co., Ellwood City, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
Wellman-Seaver-Morgan Co., Cleveland, O.

Wheeling Mold & Foundry Co., Wheeling, W. Va.

**MERCHANTS.**

Barclay M. Everson, Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Marshall & Husehart Machinery Co., 62 Canal St., Chicago, Ill.

Pfannmueller Engineering Co., First National Bank Bldg., Chicago, Ill.

F. B. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

Wickes Bros., Saginaw, Mich.

**Rolling Mill Machinery.**

**Aluminum—**

A. Garrison Foundry Co., Pittsburgh, Pa.

**Rolling Mill Machinery.**

**Brass and Copper—**

Birmingham Iron Foundry, Derby, Ct.

Blake & Johnson Co., Waterbury, Ct.

Farrel Foundry & Machine Co., Ansonia, Ct.

A. Garrison Foundry Co., Pittsburgh, Pa.

Philadelphia Roll & Machine Co., 23d St.

& Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Rolling Mill Machinery.**

**Gold and Silver—**

Birmingham Iron Foundry, Derby, Ct.

Blake & Johnson Co., Waterbury, Ct.

Farrel Foundry & Machine Co., Ansonia, Ct.

A. Garrison Foundry Co., Pittsburgh, Pa.

Philadelphia Roll & Machine Co., 23d St.

& Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Rolling Mill Machinery.**

**Zinc—**

A. Garrison Foundry Co., Pittsburgh, Pa.

**Rolling Mills. Lead—**

Farrel Foundry & Machine Co., Ansonia, Ct.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Rolling Pins—**

(See Pins, Rolling.)

**Rolls. Beam Bending—**

Bethlehem Foundry & Machine Co.,

South Bethlehem, Pa.

**Rolls. Bending and Straightening—**

Badger State Machine Co., Janesville,

Wis.

Bertsch & Co., Cambridge City, Ind.

Bethlehem Foundry & Machine Co.,

South Bethlehem, Pa.

Bethlehem Steel Co., South Bethlehem,

Pa.

Birdsboro Steel Foundry & Machine Co.,

Birdsboro, Pa.

Thos. Carlin's Sons Co., N. S. Pitts-

burgh, Pa.

Cincinnati Punch & Shear Co., Cincinnati, O.

Cleveland Punch & Shear Works Co.,

Cleveland, O.

A. Garrison Foundry Co., Pittsburgh, Pa.

Hilles & Jones Co., Wilmington, Del.

Lewis Foundry & Machine Co., Groveton,

Pa.

Morgan Engineering Co., Alliance, O.

New Doty Mfg. Co., Janesville, Wis.

Niagara Machine & Tool Works, Buffalo,

N. Y.

Niles-Bement-Pond Co., 111 Broadway,

New York.

Peck, Stow & Wilcox Co., 27 Murray St.,

New York.

Philadelphia Roll & Machine Co., 23d St.

& Washington Ave., Philadelphia.



Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
Williams, White & Co., Moline, Ill.

#### MERCHANTS.

Baird Machinery Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
Marshall & Husehart Machinery Co., 62 S. Canal St., Chicago, Ill.  
Motch & Merryweather Machinery Co., Cleveland, O.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.  
Frank Toomey, 127-131 N. Third St., Philadelphia, Pa.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
Wickes Bros., Saginaw, Mich.

**Rolls. Coal Crushing—**  
Interstate Engineering Co., Bedford, O.  
Taylor Iron & Steel Co., High Bridge, N. J.

**Rolls. Crimping, Metal—**  
Bertsch & Co., Cambridge City, Ind.  
Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

E. W. Bliss Co., Brooklyn, N. Y.  
Farracute Machine Co., Bridgeton, N. J.  
New Doty Mfg. Co., Janesville, Wis.  
Niagara Machine & Tool Works, Buffalo, N. Y.

George A. Ohl & Co., Newark, N. J.

**Rolls. Crushing—**  
Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Farrel Foundry & Mach. Co., Ansonia, Ct.  
Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.  
Wellman-Seaver-Morgan Co., Cleveland, O.

**Rolls. Forging—**  
Ajax Mfg. Co., Cleveland, O.

Kilborn & Bishop Co., New Haven, Ct.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Williams, White & Co., Moline, Ill.

**Rolls. Hand and Belt Power, Bending—**

Badger State Machine Co., Janesville, Wis.

Bertsch & Co., Cambridge City, Ind.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Cincinnati Punch & Shear Co., Cincinnati, O.

Hilles & Jones Co., Wilmington, Del.

New Doty Mfg. Co., Janesville, Wis.

Niagara Machine & Tool Works, Buffalo, N. Y.

Niles-Bement-Pond Co., 111 Broadway, New York.

George A. Ohl & Co., Newark, N. J.  
Wickes Bros., Saginaw, Mich.

**Rolls. Hardened Forged Steel—**

Blake & Johnson Co., Waterbury, Ct.  
Mesta Machine Co., Pittsburgh, Pa.

F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.

**Rolls, Jewelers—**

Blake & Johnson Co., Waterbury, Ct.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
E. J. Mauville Mach. Co., Waterbury, Ct.  
Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Rolls, Paper—**  
Farrel Foundry & Mach. Co., Ansonia, Ct.

**Rolls, Rubber Covered—**

Geo. P. Clark Co., Windsor Locks, Ct.  
New York Belting & Packing Co., 91-93 Chambers St., New York.

**Rolls, Sand, Chilled and Steel—**

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Birmingham Iron Foundry, Derby, Ct.

Blake & Johnson Co., Waterbury, Ct.  
Farrel Foundry & Mach. Co., Ansonia, Ct.

A. Garrison Foundry Co., Pittsburgh, Pa.  
Hyde Park Foundry & Machine Co., Hyde Park, Pa.

Lewis Foundry & Machine Co., Groveton, Pa.

Mesta Machine Co., Pittsburgh, Pa.  
Philadelphia Roll & Machine Co., 23d St. and Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.  
Scaman-Sleeth Co., Pittsburgh, Pa.

Standard Engineering Co., Ellwood City, Pa.

Tindel-Morris Co., Eddystone, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Wheeling Mold & Foundry Co., Wheeling, W. Va.

**Rolls, Skate—**  
(See Wheels, Roller Skate.)

**Rolls, Trawl—**  
Boston & Lockport Block Co., East Boston, Mass.

**Roof Bolts, Rods—**  
(See Bolts, Rods.)

**Roofing, Asbestos—**  
Asbestos Protected Metal Co., Canton, Mass.

National Roofing Co., Tonawanda, N. Y.

**Roofing, Asphalt—**  
Asphalt Ready Roofing Co., 136 Water St., New York.

(See also Felts.)

**Roofing, Asphalt, Stone Covered—**  
Asphalt Ready Roofing Co., 136 Water St., New York.

National Roofing Co., Tonawanda, N. Y.

**Roofing Brackets, Tongues—**  
(See Brackets, Tongues.)

**Roofing, Cast—**  
Asbestos Protected Metal Co., Canton, Mass.

**Roofing, Cement—**  
(See Cement, Roofing.)

**Roofing, Composition—**  
National Roofing Co., Tonawanda, N. Y.

**Roofing, Concrete—**  
(See Cement, Roofing.)

**Roofing, Doubled Refined**

**Puddled Iron—**  
Empire Iron & Steel Co., Niles, O.  
Thomas Steel Co., Niles, O.  
Youngtown Sheet & Tube Co., Youngstown, O.

**Roofing, Feldspar—**  
National Roofing Co., Tonawanda, N. Y.

**Roofing, felt—**  
Eastern Granite Roofing Co., 19 Battery Pl., New York.

National Roofing Co., Tonawanda, N. Y.

**Roofing, Fire Proof—**  
Asbestos Protected Metal Co., Canton, Mass.

**Roofing, Gravel Surfaced—**  
National Roofing Co., Tonawanda, N. Y.

**Roofing in Rolls—**  
American Sheet and Tin Plate Co., Pittsburgh, Pa.

Empire Iron & Steel Co., Niles, O.  
Merchant & Evans Co., 517 Arch St., Philadelphia, Pa.

Newport Rolling Mill Co., Newport, Ky.  
Thomas Steel Co., Niles, O.  
Youngtown Sheet & Tube Co., Youngstown, O.

**Roofing, Iron and Steel—**  
National Bridge Co. of New York, 30 Church St., New York.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Boston Bridge Works, Boston, Mass.  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

Empire Iron & Steel Co., Niles, O.  
Follansbee Bros. Co., Pittsburgh, Pa.  
Forest City Steel & Iron Co., Cleveland, O.

Inland Steel Co., First National Bank Bldg., Chicago, Ill.

McCullough Iron Co., Wilmington, Del.  
Newport Rolling Mill Co., Newport, Ky.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.  
Thomas Steel Co., Niles, O.

Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.

Youngtown Iron & Steel Roofing Co., Youngstown, O.

Youngtown Sheet & Tube Co., Youngstown, O.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.  
Arthur C. Harvey Co., Boston, Mass.

Horace T. Potts & Co., 316-320 N. Third St., Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., Halsted and Wayman Sts., Chicago, Ill.

**Roofing Metal—**

(See Corrugated Iron.)

**Roofing Plates—**

(See Sheets, Roofing.)

**Roofing, Prepared—**

Asphalt Ready Roofing Co., 136 Water St., New York.

Eastern Granite Roofing Co., 19 Battery Pl., New York.

National Roofing Co., Tonawanda, N. Y.

**Roofing, Rock Surface—**

Eastern Granite Roofing Co., 19 Battery Pl., New York.

**Roofing, Sand Surfaced—**

Asphalt Ready Roofing Co., 136 Water St., New York.

**Roofing, Sheet—**

Asbestos Protected Metal Co., Canton, Mass.

**Roofing, Smooth Surface—**

Carpenter-Morton Co., Boston, Mass.

**Roofing, Stone Surface—**

Eastern Granite Roofing Co., 19 Battery Pl., New York.

**Roofing Tin—**

(See Plate, Tin and Terne.)

**Roofs—**

(See Buildings and Bridges.)

**Root, Tobacco, Cutters—**

(See Cutters, Tobacco Root.)

**Rope, Bale—**

American Mfg. Co., 65 Wall St., N. Y.  
New York Cordage Co., 83-85 Wall St. N. Y.  
Plymouth Cordage Co., North Plymouth, Mass.

**Rope, Braided Cotton.**

**Linen, &c.—**

Broderick & Bascom Rope Co., St. Louis.  
A. Leschen & Sons Rope Co., St. Louis.  
Samson Cordage Works, Boston, Mass.

Silver Lake Co., Boston, Mass.

**Rope, Clamps, Clips, &c.—**

(See Clamps, Clips, &c.)

**Rope Coating, Filler—**

(See Coating.)

**Rope, Crucible Steel—**

A. Leschen & Sons Rope Co., St. Louis, Mo.

**Rope, Galvanized Wire—**

(See Galvanized Wire Rope.)

**Rope, Hay—**

American Mfg. Co., 65 Wall St., N. Y.  
Broderick & Bascom Rope Co., St. Louis.  
A. Leschen & Sons Rope Co., St. Louis.

New York Cordage Co., 83-85 Wall St., New York.

S. Obermayer Co., Cincinnati, O.  
J. W. Faxon Co., Philadelphia, Pa.

Plymouth Cordage Co., North Plymouth, Mass.

**Rope, Hemp, Tarred—**

American Mfg. Co., 65 Wall St., N. Y.  
New York Cordage Co., 83-85 Wall St., New York.

Plymouth Cordage Co., North Plymouth, Mass.

**Rope, Hide—**

American Mfg. Co., 65 Wall St., N. Y.  
New York Cordage Co., 83-85 Wall St., New York.

Plymouth Cordage Co., North Plymouth, Mass.

Samson Cordage Works, Boston, Mass.

**Rope, Hoisting, Phosphor-Bronze—**

Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

Riverside Metal Co., Riverside, N. J.

**Rope, Lariat—**

American Mfg. Co., 65 Wall St., N. Y.  
A. Leschen & Sons Rope Co., St. Louis.

Plymouth Cordage Co., North Plymouth, Mass.

Samson Cordage Works, Boston, Mass.

**Rope, Manila, Sisal, Jute and Hemp—**

American Mfg. Co., 65 Wall St., N. Y.  
Broderick & Bascom Rope Co., St. Louis.  
A. Leschen & Sons Rope Co., St. Louis.  
New York Cordage Co., 83-85 Wall St., New York.

Plymouth Cordage Co., North Plymouth, Mass.

**Rope, Tiller—**  
Samson Cordage Works, Boston, Mass.

**Rope, Tiller, Phosphor-Bronze—**

Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.

**Rope, Transmission—**

American Mfg. Co., 65 Wall St., N. Y.  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Broderick & Bascom Rope Co., St. Louis.  
W. A. Jones Foundry & Machine Co., 112-161 W. North Ave., Chicago, Ill.  
A. Leschen & Sons Rope Co., St. Louis.  
New York Cordage Co., 83-85 Wall St., New York.

Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

Plymouth Cordage Co., North Plymouth, Mass.

Samson Cordage Works, Boston, Mass.  
Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

**Rope, Wire—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Broderick & Bascom Rope Co., St. Louis.  
Hazard Mfg. Co., Wilkesbarre, Pa.  
A. Leschen & Sons Rope Co., St. Louis.  
Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
Phosphor Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia.  
Williamsport Wire Rope Co., Williamsport, Pa.

**Rope, Yacht—**

American Mfg. Co., 65 Wall St., N. Y.  
A. Leschen & Sons Rope Co., St. Louis, Mo.

Plymouth Cordage Co., North Plymouth, Mass.

**Ropes, Hammock and Hitching—**

American Mfg. Co., 65 Wall St., N. Y.  
Covert Mfg. Co., Troy, N. Y.  
New York Cordage Co., 83-85 Wall St., New York.

I. E. Palmer Co., Middletown, Ct.  
Samson Cordage Works, Boston, Mass.  
Steel Basket Co., Cedar Rapids, Ia.

**Ropes, Jumping—**

Standard Wire Co., New Castle, Pa.

**Ropes, Locomotive Switching—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Broderick & Bascom Rope Co., St. Louis.  
A. Leschen & Sons Rope Co., St. Louis.  
Williamsport Wire Rope Co., Williamsport, Pa.

**Ropeways, Wire—**

(See Tramways, Wire Rope.)  
**Rose Sprinkler Heads—**  
(See Heads, Rose Sprinkler.)

**Rosettes—**

(See Architectural Sheet Metal Work.)

**Rosettes, Iron—**

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Keystone Drop Forge Works, Chester, Pa.

**Rounders, Saw—**

(See Saws, Guides and Rounders.)

**Rowlocks—**

Thomas Laughlin Co., Portland, Me.  
W. & J. Tiebout, 118 Chambers St., N. Y.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Rub Irons—**

(See Irons, Rub.)

**Rubber and Paper Insulated Wire—**

(See Wires, Electrical.)

**Rubber Belting, Cement, &c.—**

(See Belting, Cement, &c.)

**Rubber Covered Wire—**

(See Wires, Electrical.)

**Rubber Goods, Mechanical—**

H. O. Canfield Co., Bridgeport, Ct.  
New York Belting & Packing Co., 91-93 Chambers St., New York.  
Springfield Tire & Rubber Co., Springfield, O.

**Rubber Mill Machinery—**

American Tool & Machine Co., Boston, Mass.

Birmingham Iron Foundry, Derby, Ct.  
Farrel Fdy. & Mach Co., Ansonia, Ct.

Philadelphia Roll & Machine Co., 23d St.

and Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.

**Rubber, Perforated Sheet—**

Erdle Perforating Co., Rochester, N. Y.

**Rubber Reclaiming Water Separators—**

(See Separators, Water, Rubber, Reclaiming.)

**Rubber Rings—**

(See Gaskets and Rings, Rubber.)

**Rubber Scrapers—**

(See Cleaners, Bar, Window.)

**Rubber Sheets, Vulcanized—**

(See Sheet Rubber, Vulcanized.)

**Rubber Springs—**

(See Bumpers and Springs.)

**Rubbers, Window—**

(See Cleaners, Window.)

**Rubbing Beds—**

Birmingham Iron Foundry, Derby, Ct.

F. R. Patch Mfg. Co., Putland, Vt.

**Rubs, Emery—**

(See Emery Rubs for Foundry Use.)

**Rudder Braces—**

(See Braces, Rudder.)

**Rulers, Desk and School—**

Chapin-Stephens Co., Pine Meadow, Ct.

Lufkin Rule Co., Saginaw, Mich.

L. S. Starrett Co., Athol, Mass.

Upton Nut Co., Cleveland, O.

**Rules, Blacksmiths—**

Lufkin Rule Co., Saginaw, Mich.

L. S. Starrett Co., Athol, Mass.

**Rules, Board and Log—**

Chapin-Stephens Co., Pine Meadow, Ct.

Humphrey Machine Co., Keene, N. H.

Lufkin Rule Co., Saginaw, Mich.

**Rules, Boxwood—**

Chapin-Stephens Co., Pine Meadow, Ct.

Keuffel & Esser Co., 127 Fulton St., N. Y.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Schuchardt & Schutte, 90 West St., N. Y.  
Stanley Rule & Level Co., New Britain,  
Ct.

Upon Nut Co., Cleveland, O.

**Rules, Combination—**  
Chapin-Stephens Co., Pine Meadow, Ct.  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Rules, Draughtsmen's—**  
L. S. Starrett Co., Athol, Mass.

**Rules, Flexible Folding—**  
Chapin-Stephens Co., Pine Meadow, Ct.  
Schuchardt & Schutte, 90 West St., N. Y.  
Stanley Rule & Level Co., New Britain,  
Ct.

L. S. Starrett Co., Athol, Mass.  
Wiebusch & Hilger, Ltd., 106-110 Lafay-  
ette St., New York.

**Rules, Glasiers'—**  
Lufkin Rule Co., Saginaw, Mich.

**Rules, Hook—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.  
Goodell-Pratt Co., Greenfield, Mass.  
L. S. Starrett Co., Athol, Mass.

**Rules, Ivory—**  
Chapin-Stephens Co., Pine Meadow, Ct.  
Schuchardt & Schutte, 90 West St., N. Y.  
Stanley Rule & Level Co., New Britain,  
Ct.

Upon Nut Co., Cleveland, O.

**Rules, Keyseat—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.  
L. S. Starrett Co., Athol, Mass.

**Rules, Lok, Caliper—**  
Humphrey Machine Co., Keene, N. H.

**Rules, Machinists'—**  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
C. E. Jennings & Co., 42 Murray St.,  
New York.

Lufkin Rule Co., Saginaw, Mich.  
Schuchardt & Schutte, 90 West St., N. Y.  
L. S. Starrett Co., Athol, Mass.  
Wiebusch & Hilger, Ltd., 106-110 Lafay-  
ette St., New York.

**Rules, Metric Steel—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

Goodell-Pratt Co., Greenfield, Mass.  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Lufkin Rule Co., Saginaw, Mich.  
Schuchardt & Schutte, 90 West St., N. Y.  
L. S. Starrett Co., Athol, Mass.

**Rules, Scale and Shrinkage—**  
Billings & Spencer Co., Hartford, Ct.  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

Chapin-Stephens Co., Pine Meadow, Ct.  
Cleveland Galvanizing Works, Cleve-  
land, O.

Keuffel & Esser Co., 127 Fulton St., N. Y.  
Lufkin Rule Co., Saginaw, Mich.  
Stanley Rule & Level Co., New Britain,  
Ct.

L. S. Starrett Co., Athol, Mass.

**Rules, Slide—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.

Chapin-Stephens Co., Pine Meadow, Ct.  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Schuchardt & Schutte, 90 West St., N. Y.  
L. S. Starrett Co., Athol, Mass.

**Rules, Spring Joint—**  
(See Rules, Flexible Folding.)

**Rules, Steel—**  
Billings & Spencer Co., Hartford, Ct.  
Brown & Sharpe Mfg. Co., Providence,  
R. I.  
Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Lufkin Rule Co., Saginaw, Mich.  
Schuchardt & Schutte, 90 West St., N. Y.  
L. S. Starrett Co., Athol, Mass.

**Rules, Steel Caliper—**  
Brown & Sharpe Mfg. Co., Providence,  
R. I.  
L. S. Starrett Co., Athol, Mass.

**Rules, Steel Cutting and  
Creasing—**  
Simonds Mfg. Co., Fitchburg, Mass.

**Rules, Tinner's—**  
Lufkin Rule Co., Saginaw, Mich.  
Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

**Rules, Zig Zag—**  
(See Rules, Flexible Folding.)

**Rumblers—**(See Barrels, Tumbling.)

**Runs, House and Car—**  
(See Ice Harvesting Tools.)

**Rust Preventative—**  
Charles H. Besly & Co., 15-21 S. Clinton  
St., Chicago, Ill.

**Rust Repeller—**  
Marlin Fire Arms Co., New Haven, Ct.

**Rust Resisting Compound—**  
U. S. Indestructible Gasket Co., 50  
Church St., New York.

**S and S Hooks—**  
(See Hooks, S and S.)

**Sad Iron Handles, Heaters,  
Stands—**  
(See Handles, Heaters, Stands.)

**Sad Irons—**  
(See Irons, Sad, Laundry, &c.)

**Saddle Tops, Bicycle—**  
(See Bicycle Saddle Tops.)

**Saddlers' Hammers—**  
(See Hammers, Saddlers' and Upholster-  
ers.)

**Saddlery Hardware—**  
Covert Mfg. Co., Troy, N. Y.

Haven Malleable Castings Co., Cincin-  
nati, O.

Kilborn & Bishop Co., New Haven, Ct.  
North & Judd Mfg. Co., New Britain, Ct.

**Saddles, Pipe—**  
Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.

H. E. Hessler Co., Syracuse, N. Y.

**Safe Works Machinery—**  
Hilles & Jones Co., Wilmington, Del.  
Niles-Rement-Pond Co., 111 Broadway,  
New York.

**Safes and Vaults—**  
Stewart Iron Works Co., Cincinnati, O.

Taylor Iron & Steel Co., High Bridge,  
N. J.

**Safes, Fire and Burglar  
Proof—**  
Stewart Iron Works Co., Cincinnati, O.

Taylor Iron & Steel Co., High Bridge,  
N. J.

**Safes, Match—**  
Arcade Mfg. Co., Freeport, Ill.  
Columbia Grey Iron Co., Columbia, Pa.

- Dover Stamping & Mfg. Co.,** Cambridge, Mass.  
**New York Stamping Co.,** Brooklyn, N. Y.  
**Charles Parker Co.,** Meriden, Ct.  
**Reading Hardware Co.,** Reading, Pa.  
**Russell & Erwin Mfg. Co.,** 94-18 Lafayette St., New York.  
**Scovill Mfg. Co.,** Waterbury, Ct.  
**Wrightsville Hardware Co.,** Wrightsville, Pa.
- Safes, Oily Waste—**  
**W. J. Clark Co.,** Salem, O.
- Safety Chains, Pins, Valves—**  
 (See Chains, Pins, Valves.)
- Sail Makers' Palms—**  
 (See Palms, Sailors' and Sail Makers'.)
- Salad Casters—**  
 (See Casters, Silver Plated.)
- Salad Servers—**  
 (See Servers, Salad.)
- Salamanders—**  
**G. Drouve Co.,** Bridgeport, Ct.
- Salinometers—**  
**American Steam Gauge & Valve Mfg. Co.,** Boston, Mass.
- Salt Machinery—**  
**Warsaw Elevator Co.,** Warsaw, N. Y.
- Salt Well Machinery—**  
 (See Well Machinery.)
- Salts—**  
 (See Peppers and Salts, Silver Plated.)
- Sample Holders—**  
 (See Holders, Sample.)
- Sand and Mud Hub Bands—**  
 (See Bands, Vehicle Wheel, Sand and Mud.)
- Sand Blast Machinery—**  
**A. Jörn, Jr.,** Waukegan, Ill.  
**D. M. Nichols Iron Works,** Gouverneur and South Sts., New York.  
**Wm. S. Nicholls,** 253 Broadway, N. Y.  
**S. Obermayer Co.,** Cincinnati, O.  
**J. W. Paxson Co.,** 1021 N. Delaware Ave., Philadelphia, Pa.  
**Louis Sacks Foundry Co.,** Newark, N. J.
- Sand, Fire—**  
**Henry Maurer & Son,** 420 E. 23d St., Troy, N. Y.
- S. Obermayer Co.,** Cincinnati, O.  
**J. W. Paxson Co.,** 1021 N. Delaware Ave., Philadelphia, Pa.
- M. D. Valentine & Bro. Co.,** Woodbridge, N. J.
- Sand Mixing Machines—**  
**Rolls, Sifters—**  
 (See Mixing Machines, Rolls, Sifters.)
- Sand, Molding—**  
**S. Obermayer Co.,** Cincinnati, O.  
**J. W. Paxson Co.,** 1021 No. Delaware Ave., Philadelphia, Pa.
- Sandpaper—**  
 (See Paper, Sand, Garnet, &c.)
- Sand Papering and Varnish Rubbing Machines—**  
**Coates Clipper Mfg. Co.,** Worcester, Mass.
- Sandstone—**  
**Pike Mfg. Co.,** Pike, N. H.
- Sanitary Specialties—**  
 (See Bathroom and Toilet Specialties.)
- Sap Pails, Spouts—**  
 (See Spouts, Sap.)
- Sash Balances, Centers, &c.—**  
 (See Balances, Centers, &c.)
- Sash Cord, Ribbon and Wire, Attachments—**  
 (See Irons, Sash Cord, Ribbon and Wire.)
- Sash, Metal—**  
 (See Window Frames and Sash, Fire Proof.)
- Sash Opening Device—**  
 (See Ventilating System, Factory Sash Operating.)
- Sash Operating Machinery—**  
 (See Openers, Sash and Window.)
- Saturating Machines for Tar Paper—**  
**Farrel Fdy. & Mach. Co.,** Ansonia, Ct.,
- Saucepans, Copper—**  
 (See Ware, Copper.)
- Saucer Holders—**  
 (See Holders.)
- Sausage Stuffers—**  
 (See Stuffers, Sausage.)
- Savings Banks, Toy—**  
 (See Toy Savings Banks.)
- Saw Arbors, Bucks, &c.—**  
 (See Arbors, Bucks, &c.)
- Saw Dust, Boxwood—**  
**Chapin-Stephens Co.,** Pine Meadow, Ct.
- Saw Filers—**  
 (See Filers, Saw.)
- Saw Grinders and Rounders—**  
**E. C. Atkins & Co.,** Indianapolis, Ind.  
**Simonds Mfg. Co.,** Fitchburg, Mass.
- Saw Guards—**  
 (See Guards, Saw.)
- Saw Guides, Band—**  
 (See Guides, Band Saw.)
- Saw Handles, Crosscut—**  
 (See Handles, Crosscut Saw.)
- Saw Mill Dogs, Trucks—**  
 (See Dogs, Trucks.)
- Saw Mill Machinery—**  
**Badger State Machine Co.,** Janesville, Wis.  
**Broderick & Bascom Rope Co.,** St. Louis.  
**Humphrey Machine Co.,** Keene, N. H.  
**Jeffrey Mfg. Co.,** Columbus, O.  
**Lane Mfg. Co.,** Montpelier, Vt.  
**A. Leschen & Sons Rope Co.,** St. Louis.  
**Soule Steam Feed Works,** Meridian, Miss.  
**Southern Engine & Boiler Works,** Jackson, Tenn.  
**Wickes Bros.,** Saginaw, Mich.
- Saw Mills, Circular—**  
**E. C. Atkins & Co.,** Indianapolis, Ind.  
**W. F. & John Barnes Co.,** Rockford, Ill.  
**Peter Gerlach Co.,** Cleveland, O.  
**Humphrey Machine Co.,** Keene, N. H.  
**R. E. Kidder,** Worcester, Mass.  
**Lane Mfg. Co.,** Montpelier, Vt.  
**Manning, Maxwell & Moore, Inc.,** 85 Liberty St., New York.  
**J. M. Marston & Co.,** Boston, Mass.  
**Seneca Falls Mfg. Co.,** Seneca Falls, N. Y.
- Saw Sets—**  
 (See Sets, Saw.)
- Saw Setting and Filing Machines, Band—**  
 (See Setting and Filing Machines, Band Saw.)
- Saw Tables, Universal—**  
**Badger State Machine Co., Inc.,** Janesville, Wis.  
**Colburn Machine Tool Co.,** Franklin, Pa.  
**Crescent Machine Co.,** Leetonia, O.  
**Manning, Maxwell & Moore, Inc.,** 85 Liberty St., New York.  
**Oliver Machinery Co.,** Grand Rapids, Mich.

**Saw Tooth Gauges—**

(See Gauges, Saw Tooth.)

**Sawing Machines, Band—**

Crescent Machine Co., Leetonia, O.  
Greaves, Klusman & Co., Cincinnati, O.  
Hobbs Mfg. Co., Worcester, Mass.  
Humphrey Machine Co., Keene, N. H.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

J. M. Marston & Co., Boston, Mass.  
Oliver Machinery Co., Grand Rapids, Mich.

H. G. Thompson & Son Co., New Haven, Ct.

Wickes Bros., Saginaw, Mich.

**Sawing Machines, Bevel**

**Band Wood—**

Crescent Machine Co., Leetonia, O.

**Sawing Machines, Cutting Off—**

(See Cutting Off Machines.)

**Sawing Machines, Electro and Linotype—**

R. E. Kidder, Worcester, Mass.

**Sawing Machines, Hand and Foot Power—**

Barnes Tool Co., New Haven, Ct.

**Sawing Machines, Metal—**  
Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

E. C. Atkins & Co., Indianapolis, Ind.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Billings & Spencer Co., Hartford, Ct.  
John T. Burr & Sons, Brooklyn, N. Y.

Espen-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.

Grant Mfg. & Machine Co., Bridgeport, Ct.

Mackintosh, Hemphill & Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.

Newton Machine Tool Works, 23d & Vine Sts., Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

H. G. Thompson & Son Co., New Haven, Ct.

Tindel-Morris Co., Eddystone, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Vandyck, Churchill Co., 8 Dey St., N. Y.

West Haven Mfg. Co., New Haven, Ct.

**Sawing Machines, Metal Band—**

A. Garrison Foundry Co., Pittsburgh, Pa.

Greaves, Klusman & Co., Cincinnati, O.

H. G. Thompson & Son Co., New Haven, Ct.

**Sawing Machines, Metal Jig—**

H. G. Thompson & Son Co., New Haven, Ct.

**Sawing Machines, Wood—**

E. C. Atkins & Co., Indianapolis, Ind.  
Bader State Machine Co., Janesville, Wis.

Colburn Machine Tool Co., Franklin, Pa.  
S. Freeman & Sons Mfg. Co., Racine, Wis.

Greaves, Klusman & Co., Cincinnati, O.

R. E. Kidder, Worcester, Mass.

Lane Mfg. Co., Montpelier, Vt.

J. M. Marston & Co., Boston, Mass.

Wickes Bros., Saginaw, Mich.

**Saws and Bucks, Boys—**

Arcade Mfg. Co., Freeport, Ill.

Henry Disston & Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.

**Saws and Frames, Turning—**

Chapin-Stephens Co., Pine Meadow, Ct.

Henry Disston & Sons, Philadelphia, Pa.

**Saws, Band—**

E. C. Atkins & Co., Indianapolis, Ind.

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.

Crescent Machine Co., Leetonia, O.

Henry Disston & Sons, Philadelphia, Pa.

Fox Machine Co., Grand Rapids, Mich.

Greaves, Klusman & Co., Cincinnati, O.

Humphrey Machine Co., Keene, N. H.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

J. M. Marston & Co., Boston, Mass.

National Saw Co., Newark, N. J.

Silver Mfg. Co., Salem, O.

Simonds Mfg. Co., Fitchburg, Mass.

H. G. Thompson & Son Co., New Haven, Ct.

**Saws, Band, for Metal—**

E. C. Atkins & Co., Indianapolis, Ind.

Henry Disston & Sons, Philadelphia, Pa.

John H. Graham & Co., 113 Chambers St., New York.

H. G. Thompson & Son Co., New Haven, Ct.

West Haven Mfg. Co., New Haven, Ct.

**Saws, Bar Cold—**

John T. Burr & Son, Brooklyn, N. Y.

Espen-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.

Tindel-Morris Co., Eddystone, Pa.

**Saws, Bench Hack—**

Goodell-Pratt Co., Greenfield, Mass.

H. G. Thompson & Son Co., New Haven, Ct.

West Haven Mfg. Co., New Haven, Ct.

**Saws, Book Binders—**

Massachusetts Saw Works, Chicopee, Mass.

**Saws, Butcher, Kitchen, &c.—**

E. C. Atkins & Co., Indianapolis, Ind.

Geo. H. Bishop & Co., Cincinnati, O.

John Chatillon & Sons, 85 Cliff St., N. Y.

Henry Disston & Sons, Philadelphia, Pa.

Goodell-Pratt Co., Greenfield, Mass.

C. E. Jennings & Co., 42 Murray St., New York.

Massachusetts Saw Works, Chicopee, Mass.

Millers Falls Co., 28 Warren St., N. Y.

National Saw Co., Newark, N. J.

Simonds Mfg. Co., Fitchburg, Mass.

H. G. Thompson & Son Co., New Haven, Ct.

**Saws, Circular—**

E. C. Atkins & Co., Indianapolis, Ind.

Crescent Machine Co., Leetonia, O.

Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

### **Saws, Combination or Key-hole—**

E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.

### **Saws, Compass or Keyhole—**

E. C. Atkins & Co., Indianapolis, Ind.  
Geo. H. Bishop & Co., Cincinnati, O.

Bridgeport Hardware Mfg. Co., Bridge-  
port, Ct.

Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.

C. E. Jennings & Co., 42 Murray St.,  
New York.

National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

### **Saws, Concave—**

(See Saws, Circular.)

### **Saws, Coping—**

E. C. Atkins & Co., Indianapolis, Ind.  
Bridgeport Hardware Mfg. Co., Bridge-  
port, Ct.

Henry Disston & Sons, Philadelphia, Pa.  
John H. Graham & Co., 113 Chambers  
St., New York.

C. E. Jennings & Co., 42 Murray St.,  
New York.

Massachusetts Saw Works, Chicopee,  
Mass.

Millers Falls Co., 28 Warren St., N. Y.

### **Saws, Crosscut—**

(See Saws, Mill, &c.)

### **Saws, Cylinder—**

E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.

### **Saws, Dehorning—**

E. C. Atkins & Co., Indianapolis, Ind.  
W. F. & John Barnes Co., Rockford, Ill.

Geo. H. Bishop & Co., Cincinnati, O.  
Henry Disston & Sons, Philadelphia, Pa.

Goodell-Pratt Co., Greenfield, Mass.  
Millers Falls Co., 28 Warren St., N. Y.

National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

### **Saws, Dovetail—**

(See Saws, Hand, &c.)

### **Saws, Fret—**

Bridgeport Hardware Mfg. Co., Bridge-  
port, Ct.

### **Saws, Gauge—**

Henry Disston & Sons, Philadelphia, Pa.

### **Saws, Grooving—**

E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.

J. M. Marston & Co., Boston, Mass.  
National Saw Co., Newark, N. J.

Simonds Mfg. Co., Fitchburg, Mass.

### **Saws, Hack, Blades and**

### **Frames—**

Arcade Mfg. Co., Freeport, Ill.  
Armstrong-Blum Mfg. Co., 109 N. Fran-  
cisco Ave., Chicago, Ill.

E. C. Atkins & Co., Indianapolis, Ind.  
Bridgeport Hardware Mfg. Co., Bridge-  
port, Ct.

Diamond Saw & Stamping Works, Buf-  
falo, N. Y.

Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.

John H. Graham & Co., 113 Chambers  
St., New York.

C. E. Jennings & Co., 42 Murray St., N. Y.  
Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Massachusetts Saw Works, Chicopee,  
Mass.

Millers Falls Co., 28 Warren St., N. Y.  
National Saw Co., Newark, N. J.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Simonds Mfg. Co., Fitchburg, Mass.  
L. S. Starrett Co., Athol, Mass.

H. G. Thompson & Son Co., New Haven,  
Ct.

Union Hardware Co., Torrington, Ct.  
West Haven Mfg. Co., New Haven, Ct.

(See also Blades, Hack Saw.)

### **Saws, Hack, Power—**

Armstrong-Blum Mfg. Co., 109 N. Fran-  
cisco Ave., Chicago, Ill.

E. C. Atkins & Co., Indianapolis, Ind.  
Jas. Clark, Jr., Electric Co., Louisville,  
Ky.

Diamond Saw & Stamping Works, Buf-  
falo, N. Y.

Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.

A. L. Henderer's Sons, Wilmington, Del.  
Hoefler Mfg. Co., Freeport, Ill.

Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Massachusetts Saw Works, Chicopee,  
Mass.

Millers Falls Co., 28 Warren St., N. Y.  
Niles-Bement-Pond Co., 111 Broadway,  
New York.

Robertson Drill & Tool Co., Buffalo,  
N. Y.

Robertson Mfg. Co., Buffalo, N. Y.  
H. G. Thompson & Son Co., New Haven,  
Ct.

West Haven Mfg. Co., New Haven, Ct.

### **Saws, Hack, Power, High**

**Sneed—**  
Robertson Drill & Tool Co., Buffalo,  
N. Y.

### **Saws, Hand, Panel, Back,**

**&c.—**  
E. C. Atkins & Co., Indianapolis, Ind.

Geo. H. Bishop & Co., Cincinnati, O.  
Henry Disston & Sons, Philadelphia, Pa.

C. E. Jennings & Co., 42 Murray St.,  
New York.

Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

### **Saws, Heading—**

National Saw Co., Newark, N. J.

### **Saws, Hot Metal—**

E. C. Atkins & Co., Indianapolis, Ind.  
Billings & Spencer Co., Hartford, Ct.

Henry Disston & Sons, Philadelphia, Pa.  
Lewis Foundry & Machine Co., Groveton,  
Pa.

Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Morgan Construction Co., Worcester, Mass.  
Morgan Engineering Co., Alliance, O.

National Saw Co., Newark, N. J.  
United Engineering & Foundry Co., Pitts-  
burgh, Pa.

### **Saws, Ice—**

E. C. Atkins & Co., Indianapolis, Ind.  
Geo. H. Bishop & Co., Cincinnati, O.

Henry Disston & Sons, Philadelphia, Pa.

Peter Gerlach Co., Cleveland, O.  
Gifford-Wood Co., Arlington, Mass.  
C. E. Jennings & Co., 42 Murray St., New York.

National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

**Saws, Inserted Tooth for Cold Cutting—**  
Tindel-Morris Co., Eddystone, Pa.

**Saws, Jewelers'—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Millers Falls Co., 28 Warren St., N. Y.

**Saws, Jig—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Fox Machine Co., Grand Rapids, Mich.  
Seneca Falls Mfg. Co., Seneca Falls, N. Y.

**Saws, Jointer—**  
National Saw Co., Newark, N. J.

**Saws, Metal Cutting—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Armstrong-Blum Mfg. Co., 109 N. Francisco, Ave., Chicago, Ill.

Becker Milling Machine Co., Hyde Park, Mass.

R. M. Clough, Tolland, Ct.  
Henry Disston & Sons, Philadelphia, Pa.

Espen-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.

Hoefler Mfg. Co., Freeport, Ill.  
Lewis Foundry & Machine Co., Groveton, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

National Saw Co., Newark, N. J.  
National Tool Co., Cleveland, O.

Robertson Mfg. Co., Buffalo, N. Y.  
Simonds Mfg. Co., Fitchburg, Mass.

H. G. Thompson & Son Co., New Haven, Ct.

Tindel-Morris Co., Eddystone, Pa.

**Saws, Metal, Double Edge—**  
National Saw Co., Newark, N. J.

**Saws, Metal Jig—**  
H. G. Thompson & Son Co., New Haven, Ct.

**Saws, Mill, Muley, Crosscut Drag, Gang Pit, Whip, &c.—**

E. C. Atkins & Co., Indianapolis, Ind.  
Geo. H. Bishop & Co., Cincinnati, O.

Henry Disston & Sons, Philadelphia, Pa.  
National Saw Co., Newark, N. J.

Simonds Mfg. Co., Fitchburg, Mass.

**Saws, Miter Box—**  
(See Saws, Hand, Panel, Back, &c.)

**Saws, Plumbers'—**  
E. C. Atkins & Co., Indianapolis, Ind.

Henry Disston & Sons, Philadelphia, Pa.  
C. E. Jennings & Co., 42 Murray St., New York.

National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

**Saws, Plumbers', Hollow Mill—**  
West Haven Mfg. Co., New Haven, Ct.

**Saws, Pruning—**  
E. C. Atkins & Co., Indianapolis, Ind.

Geo. H. Bishop & Co., Cincinnati, O.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.

Henry Disston & Sons, Philadelphia, Pa.  
C. E. Jennings & Co., 42 Murray St., N. Y.

Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

**Saws, Rail—**

E. C. Atkins & Co., Indianapolis, Ind.  
Espen-Lucas Machine Works, Broad and Noble Sts., Philadelphia, Pa.

Industrial Works, Bay City, Mich.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

H. G. Thompson & Sons Co., New Haven, Ct.

**Saws, Rift—**

E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.

Simonds Mfg. Co., Fitchburg, Mass.

**Saws, Scroll, and Scroll Saw**

**Blades—**

E. C. Atkins & Co., Indianapolis, Ind.  
W. F. & John Barnes Co., Rockford, Ill.

Henry Disston & Sons, Philadelphia, Pa.  
John H. Graham & Co., 113 Chambers St., New York.

Greaves, Klusman & Co., Cincinnati, O.  
Millers Falls Co., 28 Warren St., N. Y.

National Saw Co., Newark, N. J.  
Oliver Machinery Co., Grand Rapids, Mich.

Seneca Falls Mfg. Co., Seneca Falls, N. Y.

Simonds Mfg. Co., Fitchburg, Mass.

**Saws, Segment or Veneer—**

E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

**Saws, Ship Carpenters'—**

(See Saws, Hand, &c.)

**Saws, Slate—**

(See Saws, Circular.)

**Saws, Slitting—**

E. C. Atkins & Co., Indianapolis, Ind.  
Becker Milling Machine Co., Hyde Park, Mass.

Henry Disston & Sons, Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Pratt & Whitney Co., Hartford, Ct.  
Standard Tool Co., Cleveland, O.

**Saws, Slitting, Metal—**

E. C. Atkins & Co., Indianapolis, Ind.  
R. M. Clough, Tolland, Ct.

Henry Disston & Sons, Philadelphia, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

National Tool Co., Cleveland, O.  
Pratt & Whitney Co., Hartford, Ct.

Standard Tool Co., Cleveland, O.

**Saws, Slotting Screw—**

Henry Disston & Sons, Philadelphia, Pa.

**Saws, Stair Builders'—**

National Saw Co., Newark, N. J.

**Saws, Stone—**

E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.

J. Gilmour, Bennett Bldg., New York.  
Hendrick Mfg. Co., Carbondale, Pa.

F. R. Patch Mfg. Co., Rutland, Vt.

**Saws, Swing Cut Off—**

E. C. Atkins & Co., Indianapolis, Ind.  
Badger State Machine Co., Inc., Janesville, Wis.

Crescent Machine Co., Leetonia, O.  
Fox Machine Co., Grand Rapids, Mich.

Greaves, Klusman & Co., Cincinnati, O.  
Lane Mfg. Co., Montpelier, Vt.



Oliver Machinery Co., Grand Rapids, Mich.

**Saws, Tube—**

E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.  
Waterbury, Farrel Foundry & Machine Co., Waterbury, Ct.

**Saws, Turning—**

(See Webs, Turning, Felloe, &c.)

**Saws, Wood, and Wood Saw**

Blades—  
E. C. Atkins & Co., Indianapolis, Ind.  
Geo. H. Bishop & Co., Cincinnati, O.  
Henry Disston & Sons, Philadelphia, Pa.  
C. E. Jennings & Co., 42 Murray St., N. Y.  
National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

**Scaffold Irons—**

Jas. L. Taylor Mfg. Co., Bloomfield, N. J.

**Scaffolding, Adjustable—**

H. B. Fuller, St. Paul, Minn.

**Scale Attachments, Record-**

ing, Registering, &c.—

Standard Scale & Supply Co., Pittsburgh.

**Scale Beams—**

John Chatillon & Sons, 85 Cliff St., N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Scalers and Measures, Steel.**

**Diamond Points for Mark-**

ing—

N. E. Dickinson, 47 Maiden Lane, N. Y.

**Scalers, Fish—**

John Chatillon & Sons, 85 Cliff St., N. Y.  
Landers, Frary & Clark, New Britain, Ct.  
Reading Hardware Co., Reading, Pa.  
Susquehanna Casting Co., Wrightsville, Pa.

**Scalers, Abattoir and**

**Butcher—**

John Chatillon & Sons, 85 Cliff St., N. Y.  
Landers, Frary & Clark, New Britain, Ct.  
Reading Hardware Co., Reading, Pa.  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Armor Plate—**

(See Scales, Special.)

**Scales, Army and Navy—**

Standard Scale & Supply Co., Pittsburgh.

**Scales, Arsenal—**

(See Scales, Special.)

**Scales, Asphalt—**

(See Scales, Special.)

**Scales, Assay—**

(See Balances and Scales, Assay.)

**Scales, Bathroom—**

John Chatillon & Sons, 85 Cliff St., N. Y.  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Billet—**

(See Scales, Special.)

**Scales, Blast Furnace—**

(See Scales, Furnace, Charging and Foundry.)

**Scales, Bloom—**

(See Scales, Special.)

**Scales, Boiler Room—**

Standard Scale & Supply Co., Pittsburgh, Pa.

**Scales, Brewers'—**

(See Scales, Hopper.)

**Scales, Bullock—**

(See Scales, Stock.)

**Scales, Bundling—**

(See Scales, Special.)

**Scales, Butter—**

(See Scales, Counter and Grocers'.)

**Scales, Candy—**

American Cutlery Co., Chicago, Ill.  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Landers, Frary & Clark, New Britain, Ct.  
I. S. Spencer's Sons, Guilford, Ct.  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Charging—**

Standard Scale & Supply Co., Pittsburgh, Pa.

**Scales, Cheese—**

Standard Scale & Supply Co., Pittsburgh.

**Scales, Coal Mine and Tip-**

ple—

Standard Scale & Supply Co., Pittsburgh.

**Scales, Copper—**

Standard Scale & Supply Co., Pittsburgh, Pa.

**Scales, Cotton and Wool—**

Standard Scale & Supply Co., Pittsburgh.

**Scales, Counter and Gro-**

cers—

American Cutlery Co., Chicago, Ill.  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Landers, Frary & Clark, New Britain, Ct.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
I. S. Spencer's Sons, Guilford, Ct.  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Crane—**

Standard Scale & Supply Co., Pittsburgh, Pa.

**Scales, Creamery, Dairy—**

(See Scales, Cheese.)

**Scales, Depot—**

Standard Scale & Supply Co., Pittsburgh.

**Scales, Dormant and Ware-**

house—

Standard Scale & Supply Co., Pittsburgh.

**Scales, Draftsmen's—**

Brown & Sharpe Mfg. Co., Providence, R. I.

Keuffel & Esser Co., 127 Fulton St., N. Y.

L. S. Starrett Co., Athol, Mass.

**Scales, Dump—**

Standard Scale & Supply Co., Pittsburgh, Pa.

**Scales, Estimating—**

John Chatillon & Sons, 85 Cliff St., N. Y.

**Scales, Express Package—**

Standard Scale & Supply Co., Pittsburgh.

**Scales, Family—**

American Cutlery Co., Chicago, Ill.  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Landers, Frary & Clark, New Britain, Ct.  
I. S. Spencer's Sons, Guilford, Ct.

Standard Scale & Supply Co., Pittsburgh.

**Scales, Fish—**

Landers, Frary & Clark, New Britain, Ct.  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Flour, Freight—**

(See Scales, Dormant and Warehouse.)

**Scales, Furnace Charging**

and Foundry—

Standard Scale & Supply Co., Pittsburgh.

**Scales, Galvanized—**

(See Scales, Fish.)

**Scales, Gauging, Liquids—**

Standard Scale & Supply Co., Pittsburgh, Pa.

**Scales, Glass Works—**

Standard Scale & Supply Co., Pittsburgh.

**Scales, Graduated—**

Keuffel & Esser Co., 127 Fulton St., N. Y.  
L. S. Starrett Co., Athol, Mass.

**Scales, Grain and Elevator—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Grocers'—**  
(See Scales, Counter and Grocers'.)

**Scales, Hanging Hopper Beam—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Hay—**  
(See Scales, Stock, Wagon and Hay.)

**Scales, Hide and Leather—**  
Standard Scale & Supply Co., Pittsburgh, Pa.

**Scales, Hopper—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Hospital—**  
(See Scales, Professional.)

**Scales, Hot Bed, Disappearing—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Hot Metal—**  
(See Scales, Special.)

**Scales, Ice—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

(Gifford-Wood Co., Arlington, Mass.)  
Landers, Frary & Clark, New Britain, Ct.

**Scales, Incline Plane—**  
(See Scales, Special.)

**Scales, Industrial Railway—**  
Arthur Koppel Co., Pittsburgh, Pa.

Standard Scale & Supply Co., Pittsburgh.  
Ernst Wiener Co., Church and Fulton

Sts., New York.  
**Scales, Iron Dealers'—**  
(See Scales, Dormant and Warehouse.)

**Scales, Lary—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Leather Inspectors'—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

**Scales, Letter—**  
Landers, Frary & Clark, New Britain, Ct.

Standard Scale & Supply Co., Pittsburgh.

**Scales, Locomotive—**  
(See Scales, Special.)

**Scales, Malt—**  
(See Scales, Hopper.)

**Scales, Market—**  
(See Scales, Counter and Grocers'.)

**Scales, Metal—**  
(See Scales, Ore, Metal and Pig Iron.)

**Scales, Milk and Cream—**  
Landers, Frary & Clark, New Britain, Ct.

Standard Scale & Supply Co., Pittsburgh, Pa.

**Scales, Miners' and Transportation—**  
Standard Scale & Supply Co., Pittsburgh, Pa.

**Scales, Mixer—**  
(See Scales, Special.)

**Scales, Muck Bar—**  
(See Scales, Special.)

**Scales, Ore Bucket—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Ore, Metal and Pig Iron—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Personal—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

Standard Scale & Supply Co., Pittsburgh.

**Scales, Physicians'—**  
(See Scales, Professional.)

**Scales, Pig Iron—**  
(See Scales, Ore, Metal and Pig Iron.)

**Scales, Pig Iron Car—**  
(See Scales, Special.)

**Scales, Platform—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

C. W. Hunt Co., West New Brighton, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Standard Scale & Supply Co., Pittsburgh.  
Ernst Wiener Co., Church and Fulton

Sts., New York.  
**Scales, Portable—**  
(See Scales, Platform.)

**Scales, Postal—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

International Silver Co., Meriden, Ct.  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Pottery Churning—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Professional—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Rail—**  
(See Scales, R. R. Track.)

**Scales, R. R. Track—**  
Arthur Koppel Co., Pittsburgh, Pa.

Standard Scale & Supply Co., Pittsburgh.  
Ernst Wiener Co., Church and Fulton

Sts., New York.  
**Scales, Recruiting—**  
(See Scales, Army and Navy.)

**Scales, Reverse Acting Meat Beam—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

Standard Scale & Supply Co., Pittsburgh.

**Scales, Rolling Mill—**  
(See Scales, Charging.)

**Scales, Salt Meat—**  
(See Scales, Fish.)

**Scales, Special—**  
Armor Plate, Billet, Bloom,  
Hot Metal, Incline Plane,

Locomotive, Mixer, Muck  
Bar, Pig Iron Car, Steel

Plant Turntable—  
Standard Scale & Supply Co., Pittsburgh,

Pa.

**Scales, Spice—**  
(See Scales, Counter and Grocers'.)

**Scales, Spring—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

Landers, Frary & Clark, New Britain, Ct.  
I. S. Spencer's Sons, Guilford, Ct.

Standard Scale & Supply Co., Pittsburgh.

**Scales, Square Platform—**  
(See Scales, Platform.)

**Scales, Steel Plant—**  
(See Scales, Special.)

**Scales, Stock, Wagon and Hay—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Suspension—**  
John Chatillon & Sons, 85 Cliff St., N. Y.

Standard Scale & Supply Co., Pittsburgh.

**Scales, Tank—**  
Standard Scale & Supply Co., Pittsburgh,

Pa.

**Scales, Tea—**  
(See Scales, Counter and Grocers'.)

**Scales, Tipple—**  
(See Scales, Coal Mine and Tipple.)

**Scales, Tramway—**  
Standard Scale & Supply Co., Pittsburgh.

**Scales, Traveling Crane—**  
Standard Scale & Supply Co., Pittsburgh,

- Scales, Trip—**  
(See Scales, Counter and Grocers'.)
- Scales, Turntable—**  
(See Scales, Special.)
- Scales, Vibratory Axle—**  
(See Scales, Hide and Leather.)
- Scales, Union—**  
John Chatillon & Sons, 85 Cliff St., N. Y.  
Standard Scale & Supply Co., Pittsburgh
- Scales, Wagon—**  
(See Scales, Stock, Wagon and Hay.)
- Scales, Warehouse—**  
(See Scales, Dormant and Warehouse.)
- Scales, Wheelbarrow—**  
Standard Scale & Supply Co., Pittsburgh, Pa.
- Scales, Whiskey—**  
Standard Scale & Supply Co., Pittsburgh, Pa.
- Scales, Wool—**  
Standard Scale & Supply Co., Pittsburgh, Pa.
- Scales, Yarn—**  
Brown & Sharpe Mfg. Co., Providence, R. I.
- Scaling Machines for Metal—**  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.
- Scarfing Machines for Tube Mills—**  
United Engineering & Foundry Co., Pittsburgh, Pa.
- Scarfing Machines, Plate—**  
Detrick & Harvey Machine Co., Baltimore, Md.
- School Houses, Portable—**  
(See Houses, Portable.)
- School Outfits, Manual Training—**  
Oliver Machinery Co., Grand Rapids, Mich.
- F. E. Reed Co., Worcester, Mass.**
- Schools, Manual Training—**  
Washburn Shops, Worcester, Mass.
- Scissors—**  
(See Shears and Scissors.)
- Scissors, Bent—**  
Claus Shear Co., Fremont, O.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.
- Scissors, Button Hole—**  
Acme Shear Co., Bridgeport, Ct.  
Atlas Shear Co., Bridgeport, Ct.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.
- Claus Shear Co., Fremont, O.**  
**W. H. Compton Shear Co., Newark, N. J.**  
**Cronk & Carrier Mfg. Co., Elmira, N. Y.**  
**Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.**  
(See also Cutters, Buttonhole.)
- Scissors, Cigar Cutter and Pocket—**  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.
- Scissors, Editors' or Desk—**  
(See Shears.)
- Scissors, Electrician—**  
W. H. Compton Shear Co., Newark, N. J.
- Scissors, Embroidery and Fancy—**  
Atlas Shear Co., Bridgeport, Ct.  
Claus Shear Co., Fremont, O.
- W. H. Compton Shear Co., Newark, N. J.**  
**Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.**
- Scissors, Finger Nail—**  
(See Scissors, Manicure.)
- Scissors, Kindergarten—**  
Acme Shear Co., Bridgeport, Ct.  
Atlas Shear Co., Bridgeport, Ct.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.
- Scissors, Ladies—**  
(See Shears and Scissors.)
- Scissors, Manicure—**  
Claus Shear Co., Fremont, O.  
W. H. Compton Shear Co., Newark, N. J.
- Scissors, Pocket—**  
Acme Shear Co., Bridgeport, Ct.  
Atlas Shear Co., Bridgeport, Ct.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.
- Claus Shear Co., Fremont, O.**  
**W. H. Compton Shear Co., Newark, N. J.**  
**Cronk & Carrier Mfg. Co., Elmira, N. Y.**  
**R. Heinisch's Sons Co., Newark, N. J.**  
**Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.**
- Scissors, Tailors' Points—**  
(See Shears, Tailors.)
- Scoop Nets—**  
(See Nets, Scoop.)
- Scoops, Ash Pan—**  
Hubbard & Co., Pittsburgh, Pa.
- Scoops, Breaking Down—**  
Steel Basket Co., Cedar Rapids, Ia.
- Scoops, Candy—**  
John Chatillon & Sons, 85 Cliff St., N. Y.
- Scoops, Charging—**  
Avery Stamping Co., Cleveland, O.  
Hubbard & Co., Pittsburgh, Pa.  
Steel Basket Co., Cedar Rapids, Ia.
- Scoops, Cheese—**  
American Cutlery Co., Chicago, Ill.  
Landers, Fry & Clark, New Britain, Ct.
- Scoops, Firing—**  
Avery Stamping Co., Cleveland, O.  
Hubbard & Co., Pittsburgh, Pa.  
Steel Basket Co., Cedar Rapids, Ia.
- Scoops, Furnace—**  
(See Scoops, Firing.)
- Scoops, Furnace, Pole Hole—**  
(See Shovels and Scoops.)
- Scoops, Gas Stoking—**  
(See Scoops, Charging.)
- Scoops, Grain, Coal, &c.—**  
Avery Stamping Co., Cleveland, O.  
W. J. Clark Co., Salem, O.  
Hubbard & Co., Pittsburgh, Pa.  
Steel Basket Co., Cedar Rapids, Ia.
- Scoops, Ice Cream—**  
Erie Specialty Co., Erie, Pa.
- Scoops, Locomotive—**  
(See Scoops, Firing.)
- Scoops, Ore—**  
Hubbard & Co., Pittsburgh, Pa.
- Scoops, Sand—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.
- Scoops, Saw Dust—**  
Hubbard & Co., Pittsburgh, Pa.  
Steel Basket Co., Cedar Rapids, Ia.
- Scoops, Wooden—**  
John Sommer Faucet Co., Newark, N. J.
- Scrap—**  
(See Material, Old.)

- Scraper and Buffer Steels—**  
(See Steels, Buffer and Scraper.)
- Scrapers, Bar—**  
(See Cleaners, Bar.)
- Scrapers, Block—**  
L. S. Starrett Co., Athol, Mass.
- Scrapers, Boiler Flue—**  
(See Cleaners, Flue.)
- Scrapers, Box—**  
Chapin-Stevens Co., Pine Meadow, Ct.  
Stanley Rule & Level Co., New Britain, Ct.
- Scrapers, Butchers' Block—**  
John Chatillon & Sons, 85 Cliff St., N. Y.  
National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.  
L. S. Starrett Co., Athol, Mass.
- Scrapers, Cabinet and Bench—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Geo. H. Bishop & Co., Cincinnati, O.  
Henry Disston & Sons, Philadelphia, Pa.  
C. E. Jennings & Co., 42 Murray St., New York.  
National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.  
Stanley Rule & Level Co., New Britain, Ct.  
L. S. Starrett Co., Athol, Mass.
- Scrapers, Ditching—**  
Kilbourne & Jacobs Mfg. Co., Columbus, O.
- Scrapers, Drag—**  
(See Scrapers, Road.)
- Scrapers, Floor—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Hurley Machine Co., 153-159 S. Jefferson St., Chicago, Ill.  
Osborn Mfg. Co., Cleveland, O.  
L. S. Starrett Co., Athol, Mass.
- Scrapers, Flue—**  
(See Cleaners, Flue.)
- Scrapers, Foot—**  
Arcade Mfg. Co., Freeport, Ill.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Columbia Grey Iron Co., Columbia, Pa.  
Griffin Mfg. Co., Erie, Pa.  
Heath Foundry & Machine Co., Plymouth, O.  
National Mfg. Co., Sterling, Ill.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Richards Mfg. Co., Aurora, Ill.  
Wrightsville Hardware Co., Wrightsville, Pa.
- Scrapers, Hog—**  
John Chatillon & Sons, 85 Cliff St., N. Y.  
W. J. Clark Co., Salem, O.
- Scrapers, Ice—**  
(See Ice Harvesting Tools.)
- Scrapers, Kettle—**  
Arcade Mfg. Co., Freeport, Ill.  
F. E. Kohler & Co., Canton, O.  
Wire Goods Co., Worcester, Mass.
- Scrapers, Machinists—**  
Henry Disston & Sons, Philadelphia, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
Nicholson File Co., Providence, R. I.
- Scrapers, Metal—**  
Kilborn & Bishop Co., New Haven, Ct.
- Scrapers, Plumber's—**  
Irvington Mfg. Co., Irvington, N. J.
- Thomas Laughlin Co., Portland, Me.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.
- Scrapers, Road—**  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Syracuse Chilled Plow Co., Syracuse, N. Y.
- Scrapers, Sheet Metal—**  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.
- Scrapers, Shin—**  
Kilborn & Bishop Co., New Haven, Ct.  
Thomas Laughlin Co., Portland, Me.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.
- Scrapers, Shovel—**  
Arcade Mfg. Co., Freeport, Ill.
- Scrapers, Sidewalk—**  
(See Cleaners, Sidewalk.)
- Scrapers, Single or Double End—**  
Hubbard & Co., Pittsburgh, Pa.
- Scrapers, Stove Flue—**  
Arcade Mfg. Co., Freeport, Ill.  
Dover Stamping & Mfg. Co., Cambridge, Mass.
- Scrapers, Veneer—**  
Stanley Rule & Level Co., New Britain, Ct.
- Scrapers, Walk and Street—**  
American Fork & Hoe Co., Cleveland, O.  
F. E. Kohler & Co., Canton, O.  
L. & I. J. White Co., Buffalo, N. Y.
- Scrapers, Wall—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.  
Chapin-Stevens Co., Pine Meadow, Ct.  
Columbian Cutlery Co., Reading, Pa.  
Henry Disston & Sons, Philadelphia, Pa.  
C. E. Jennings & Co., 42 Murray St., New York.  
Kilborn & Bishop Co., New Haven, Ct.  
F. E. Kohler & Co., Canton, O.  
National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.
- Scrapers, Wheeled—**  
(See Scrapers, Road.)
- Scratch Awls, Gauges—**  
(See Awls, Gauges.)
- Screen Bolts, Doors, &c.—**  
(See Bolts, Doors, &c.)
- Screen Door Hinges—**  
(See Hinges, Spring.)
- Screen, Wire Cloth—**  
(See Cloth, Wire.)
- Screens, Cement—**  
Chas. Mundt & Sons, 441 Pearl St., N. Y.
- Screens, Chalk Trough—**  
Buffalo Wire Works Co., Inc., Buffalo, N. Y.
- Screens, Cotton Seed Oil—**  
Dufur & Co., Baltimore, Md.  
Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 224 No. Union St., Chicago, Ill.  
Hendrick Mfg. Co., Carbondale, Pa.  
Manhattan Perforated Metal Co., 237 Centre St., New York.

Michigan Wire Cloth Co., Detroit, Mich.  
Chas. Mundt & Sons, 441-447 Pearl St.,  
New York.

W. S. Tyler Co., Cleveland, O.

**Screens, Fertilizer—**  
Dufur & Co., Baltimore, Md.

**Screens, Filter—**  
Standard Wire Co., New Castle, Pa.

**Screens, Fire, Folding—**  
Buffalo Wire Works Co., Buffalo, N. Y.  
S. M. Howes Co., Boston, Mass.

**Screens, Mining—**  
Dufur & Co., Baltimore, Md.  
Harrington & King Perforating Co., 224

N. Union St., Chicago, Ill.  
Jeffrey Mfg. Co., Columbus, O.

Ludlow-Saylor Wire Co., St. Louis, Mo.  
Manhattan Perforated Metal Co., 237

Centre St., New York.  
Michigan Wire Cloth Co., Detroit, Mich.

Chas. Mundt & Sons, 441-447 Pearl St.,  
New York.

W. S. Tyler Co., Cleveland, O.  
Webster Mfg. Co., 1075-1111 W. 15th St.,  
New York.

Wright Wire Co., Worcester, Mass.

**Screens, Ornamental, Per-**  
**forated Sheet or Bronze—**

Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., 224

No. Union St., Chicago, Ill.  
Manhattan Perforated Metal Co., 237

Centre St., New York.

**Screens, Radiator—**  
Erdle Perforating Co., Rochester, N. Y.

Harrington & King Perforating Co., 224  
No. Union St., Chicago, Ill.

Wright Wire Co., Worcester, Mass.

**Screens, Revolving—**  
Thomas Carlin's Sons Co., N. S. Pitts-

burgh, Pa.  
H. W. Caldwell & Son Co., Western Ave.

and 17th St., Chicago, Ill.  
Erdle Perforating Co., Rochester, N. Y.

Harrington & King Perforating Co., 224  
N. Union St., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.  
Howard & Morse, 45 Fulton St., N. Y.

Interstate Engineering Co., Bedford, O.  
Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Philadelphia, Pa.  
Manhattan Perforated Metal Co., 237

Centre St., New York.  
Fred J. Meyers Mfg. Co., Hamilton, O.

Michigan Wire Cloth Co., Detroit, Mich.  
Charles Mundt & Sons, 441-447 Pearl St.,  
New York.

Taylor Iron & Steel Co., High Bridge,  
N. J.

W. S. Tyler Co., Cleveland, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.

Wright Wire Co., Worcester, Mass.

**Screens, Rolled Slot—**  
W. S. Tyler Co., Cleveland, O.

**Screens, Sand and Coal, &c.—**  
Buffalo Wire Works Co., Buffalo, N. Y.

H. W. Caldwell & Son Co., Western Ave.  
and 17th St., Chicago, Ill.

Geo. V. Cresson Co., 18th St. & Alle-

gheny Ave., Philadelphia, Pa.  
Edward Darby & Sons, 233-235 Arch St.,  
Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Erdle Perforating Co., Rochester, N. J.

Estey Wire Works Co., 59 Fulton St.,  
New York.

Gilbert & Bennett Mfg. Co., 277 Broad-  
way, New York.

Glen Mfg. Co., Ellwood City, Pa.  
Harrington & King Perforating Co., 224

No. Union St., Chicago, Ill.  
Hendrick Mfg. Co., Carbondale, Pa.

Howard & Morse, 45 Fulton St., N. Y.  
C. W. Hunt Co., West New Brighton, N. Y.

Interstate Engineering Co., Bedford, O.  
Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Philadelphia, Pa.  
Ludlow-Saylor Wire Co., St. Louis, Mo.

Fred J. Meyers Mfg. Co., Hamilton, O.  
Michigan Wire Cloth Co., Detroit, Mich.

Charles Mundt & Sons, 441-447 Pearl St.,  
New York.

Osborn Mfg. Co., Cleveland, O.  
Robins Conveying Belt Co., Park Row

Bldg., New York.  
Steel Basket Co., Cedar Rapids, Ia.

W. S. Tyler Co., Cleveland, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.

Wright Wire Co., Worcester, Mass.

**Screens, Shaking—**  
Erdle Perforating Co., Rochester, N. Y.

Harrington & King Perforating Co., 224  
No. Union St., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.  
Link-Belt Co., Philadelphia, Pa.

Ludlow-Saylor Wire Co., St. Louis, Mo.  
Michigan Wire Cloth Co., Detroit, Mich.

Charles Mundt & Sons, 441-447 Pearl St.,  
New York.

**Screens, Skylight Guard—**  
Buffalo Wire Works Co., Inc., Buffalo,

N. Y.  
Ludlow-Saylor Wire Co., St. Louis, Mo.

Wright Wire Co., Worcester, Mass.

**Screens, Swinging, Half**  
**Window—**

Phenix Mfg. Co., Milwaukee, Wis.  
**Screens, Window—**

Edward Darby & Sons, 233-235 Arch St.,  
Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

**Screens, Window, to Order—**  
Phenix Mfg. Co., Milwaukee, Wis.

**Screw Cases—**  
(See Cases, Screw and Bolt.)

**Screw Cutting Die Heads—**  
(See Die Heads, Screw Cutting.)

**Screw Cutting Dies—**  
(See Stocks, Taps and Dies.)

**Screw Driver Bits, Hold-**  
**ers—**

(See Bits, Holders.)  
**Screw Drivers—**

(See Drivers, Screw.)  
**Screw Eyes—**

(See Wire Goods, Bright.)  
**Screw Holder and Driver—**

(See Drivers, Screw and Holder.)  
**Screw Hook Hinges—**

(See Hinges, Screw Hook or Strap  
Eye.)

**Screw Jacks, Plates, Press-**  
**es, Pulleys, Wrenches—**

(See Jacks, Plates, Presses, Pulleys,  
Wrenches.)

**Screw Machine Products—**  
American Gas Machine Co., Albert Lea,

Minn.  
Bancroft & Co., Philadelphia, Pa.

Wallace Barnes Co., Bristol, Ct.  
Blake & Johnson Co., Waterbury, Ct.  
Chicago Screw Co., 2 Canal St., Chicago, Ill.

Clark Novelty Co., Rochester, N. Y.  
Detroit Screw Works, Detroit, Mich.  
Grant Mfg. & Machine Co., Bridgeport, Ct.

Hanson Bros., Plainville, Ct.  
Hartford Machine Screw Co., Hartford, Ct.

Harvey Hubbell, Bridgeport, Ct.  
Ideal Switch Co., Plainville, Ct.  
R. C. Jenkinson & Co., Newark, N. J.

John R. Keim Mills, Inc., Buffalo, N. Y.  
Frank Mossberg Co., Attleboro, Mass.  
National-Acme Mfg. Co., Cleveland, O.  
National Cycle Mfg. Co., Bay City, Mich.  
National Sewing Machine Co., Belvidere, Ill.

New Haven Machine Screw Co., New Haven, Ct.

John L. Parker Co., Worcester, Mass.  
Rhode Island Tool Co., Providence, R. I.  
Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

Screw Machine Products Corporation, Providence, R. I.

F. H. Smith Mfg. Co., 18-30 W. Randolph St., Chicago, Ill.

I. S. Spencer's Sons, Guilford, Ct.  
Universal Machine Screw Co., Hartford, Ct.

L. T. Weiss, Brooklyn, N. Y.  
F. E. Wells & Sons Co., Greenfield, Mass.

**Screw Machine Products.**  
**Hardened and Ground—**

Detroit Screw Works, Detroit, Mich.  
Hartford Machine Screw Co., Hartford, Ct.

National-Acme Mfg. Co., Cleveland, O.

**Screw Machinery, Wood—**  
Asa B. Cook Co., Hartford, Ct.

**Screw Machines—**  
Atlas Car & Mfg. Co., Cleveland, O.

Brown & Sharpe Mfg. Co., Providence, R. I.

Dresses Machine Tool Co., Cincinnati, O.  
Garvin Machine Co., Spring & Varick Sts., New York.

Hartford Machine Screw Co., Hartford, Ct.  
Jones & Lamson Machine Co., Springfield, Vt.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

E. J. Manville Mach. Co., Waterbury, Ct.  
National-Acme Mfg. Co., Cleveland, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

Pratt & Whitney Co., Hartford, Ct.  
Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

Universal Machine Screw Co., Hartford, Ct.

Warner & Swasey Co., Cleveland, O.  
F. E. Wells & Sons Co., Greenfield, Mass.

Wood Turret Machine Co., Brazil, Ind.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.  
Hill, Clarke & Co., Boston, Mass.

J. J. McCabe, 14 Dey St., New York.  
Marshall & Huschart Machinery Co., 62-64 So. Canal St., Chicago, Ill.

McDowell, Stocker & Co., 59 S. Canal St., Chicago, Ill.

Motch & Merryweather Machinery Co., Cleveland, O.

Prentiss Tool & Supply Co., 115 Liberty St., New York.

Frank Toomey, 127-131 N. Third St., Philadelphia, Pa.

Wickes Bros., Saginaw, Mich.  
Vandyck Churchill Co., 8 Dey St., N. Y.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

**Screw Machines, Automatic—**  
Hartford Machine Screw Co., Hartford, Ct.

National-Acme Mfg. Co., Cleveland, O.  
Pratt & Whitney Co., Hartford, Ct.

Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

Universal Machine Screw Co., Hartford, Ct.

**Screw Machines, Hand—**  
Pratt & Whitney Co., Hartford, Ct.

**Screw Machines, Multiple Automatic—**  
National-Acme Mfg. Co., Cleveland, O.

Universal Machine Screw Co., Hartford, Ct.

**Screw Machines, Sheet Metal—**  
E. W. Bliss Co., Brooklyn, N. Y.

Consolidated Press & Tool Co., Hastings, Mich.

Ferracute Machine Co., Bridgeton, N. J.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Chas. Leffler & Co., Brooklyn, N. Y.  
Niagara Machine & Tool Works, Buffalo, N. Y.

**Screw Machines, Tools for—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

Garvin Machine Co., Spring and Varick Sts., New York.

Hartford Machine Screw Co., Hartford, Ct.  
Pratt & Whitney Co., Hartford, Ct.

**Screw Plates with Taps and Dies—**  
(See Stocks, Taps and Dies.)

**Screw Rods—**  
(See Rods, Screw.)

**Screw Shaving Machines—**  
(See Shaving Machines, Screw.)

**Screw Slotting Cutters—**  
(See Cutters, Milling.)

**Screws, Bed—**  
Shelton Co., Shelton, Ct.

Upson Nut Co., Cleveland, O.

**Screws, Bench—**  
Detroit Screw Works, Detroit, Mich.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.  
Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

**Screws, Can—**  
Hero Fruit Jar Co., East Letterly St., Philadelphia, Pa.

**Screws, Can and Set—**  
Chicago Screw Co., 2 No. Canal St., Chicago, Ill.

Clark Bros. Bolt Co., Milldale, Ct.  
Detroit Screw Works, Detroit, Mich.

Samuel Hall's Sons, 229-233 W. 10th St., New York.

Hartford Machine Screw Co., Hartford, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Harvey Hubbell, Bridgeport, Ct.

Franklin S. Miles Co., 205 Quarry St., Philadelphia, Pa.

National-Acme Mfg. Co., Cleveland, O.

National Sewing Machine Co., Belvidere, Ill.

New Haven Machine Screw Co., New Haven, Ct.

Pawtucket Mfg. Co., Pawtucket, R. I.

Pittsburgh Screw & Bolt Co., Pittsburgh.

Reed & Prince Mfg. Co., Worcester, Mass.

Jas. Reynolds Mfg. Co., New Haven, Ct.

Rhode Island Tool Co., Providence, R. I.

Scovill Mfg. Co., Waterbury, Ct.

Screw Machine Products Corporation, Providence, R. I.

Steward & Romaine Mfg. Co., Philadelphia, Pa.

Universal Machine Screw Co., Hartford, Ct.

Upson Nut Co., Cleveland, O.

Worcester Machine Screw Co., Worcester, Mass.

**Screws, Cap. for Locks—**

American Screw Co., Providence, R. I.

Reed & Prince Mfg. Co., Worcester, Mass.

**Screws, Cement—**

Chas. Mundt & Sons, 441 Pearl St., N. Y.

**Screws, Coach and Lag—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Clark Bros. Bolt Co., Milldale, Ct.

Graham Nut Co., Pittsburgh, Pa.

Sam'l Hall's Sons, 229-233 W. 10th St., New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.

McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.

Milton Mfg. Co., Milton, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.

New Castle Forge & Bolt Co., New Castle, Pa.

Pawtucket Mfg. Co., Pawtucket, R. I.

Republic Iron & Steel Co., Pittsburgh, Pa.

Upson Nut Co., Cleveland, O.

**Screws, Collar—**

Atlas Bolt & Screw Co., Cleveland, O.

Chicago Screw Co., 2 No. Canal St., Chicago, Ill.

Detroit Screw Works, Detroit, Mich.

Hartford Machine Screw Co., Hartford, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

New Castle Forge & Bolt Co., New Castle, Pa.

New Haven Machine Screw Co., New Haven, Ct.

Pawtucket Mfg. Co., Pawtucket, R. I.

Pittsburgh Screw & Bolt Co., Pittsburgh.

Worcester Machine Screw Co., Worcester, Mass.

**Screws, Cork—**

Dame, Stoddard & Co., Boston, Mass.

Erie Specialty Co., Erie, Pa.

**Screws, Door Knob—**

American Screw Co., Providence, R. I.

Atlas Bolt & Screw Co., Cleveland, O.

Reed & Prince Mfg. Co., Worcester, Mass.

Russell & Erwin Mfg. Co., 94-96 Lafayette St., New York.

**Screws, Dowel—**

Screw Machine Products Corporation, Providence, R. I.

Wire Goods Co., Worcester, Mass.

**Screws, Drive—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Blake & Johnson Co., Waterbury, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.

**Screws, Electric Apparatus—**

(See Screws, Machine.)

**Screws, Feed, Drilling Machine—**

Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

**Screws, Galvanized—**

Thomas Laughlin Co., Portland, Me.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Screws, Gun and Pistol—**

Hartford Machine Screw Co., Hartford, Ct.

Screw Machine Products Corporation, Providence, R. I.

**Screws, Hand—**

Chapin-Stephens Co., Pine Meadow, Ct.

Detroit Screw Works, Detroit, Mich.

Oliver Machinery Co., Grand Rapids, Mich.

**Screws, Hand Rail—**

American Screw Co., Providence, R. I.

Malleable Iron Works, New Britain, Ct.

Parker Wire Goods Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

**Screws, Hanger—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Detroit Screw Works, Detroit, Mich.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Upson Nut Co., Cleveland, O.

**Screws, Headless—**

Atlas Bolt & Screw Co., Cleveland, O.

Detroit Screw Works, Detroit, Mich.

Hanson Bros., Plainville, Ct.

Hartford Machine Screw Co., Hartford, Ct.

New Haven Machine Screw Co., New Haven, Ct.

Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

Screw Machine Products Corporation, Providence, R. I.

**Screws, Hook and Eye—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

W. & J. Tiebout, 118 Chambers St., N. Y.

**Screws, Jack—**

(See Jacks, Screw.)

**Screws, Lead Lathe—**

Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

**Screws, Lock Cap—**

(See Screws, Cap for Locks.)

**Screws, Machine—**

American Screw Co., Providence, R. I.  
Atlas Bolt & Screw Co., Cleveland, O.  
Atlas Car & Mfg. Co., Cleveland, O.  
Blake & Johnson Co., Waterbury, Ct.  
Chicago Screw Co., 2 No. Canal St., Chicago, Ill.

Detroit Screw Works, Detroit, Mich.  
Hartford Machine Screw Co., Hartford, Ct.

Harvey Hubbell, Bridgeport, Ct.  
Franklin S. Miles Co., 205 Quarry St., Philadelphia, Pa.

New Haven Machine Screw Co., New Haven, Ct.

Pawtucket Mfg. Co., Pawtucket, R. I.  
Philadelphia Machine Screw Works, 624-626 Race St., Philadelphia, Pa.

Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.

Progressive Mfg. Co., Torrington, Ct.

Reed & Prince Mfg. Co., Worcester, Mass.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Scovill Mfg. Co., Waterbury, Ct.

Screw Machine Products Corporation, Providence, R. I.

Universal Machine Screw Co., Hartford, Ct.

Worcester Machine Screw Co., Worcester, Mass.

**Screws, Milled—**

Atlas Bolt & Screw Co., Cleveland, O.

Atlas Car & Mfg. Co., Cleveland, O.

Hartford Machine Screw Co., Hartford, Ct.

Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

Screw Machine Products Corporation, Providence, R. I.

**Screws, Ore Washery—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

**Screws, Pad—**

North & Judd Mfg. Co., New Britain, Ct.

**Screws, Piano Action Hardware—**

Blake & Johnson Co., Waterbury, Ct.

Pawtucket Mfg. Co., Pawtucket, R. I.

Screws, Power, for Presses—

Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

**Screws, Radiator—**

Chas. Mundt & Sons, 441 Pearl St., N. Y.

**Screws, Saw—**

E. C. Atkins & Co., Indianapolis, Ind.

Geo. H. Bishop & Co., Cincinnati, O.

Henry Diston & Sons, Philadelphia, Pa.

National Saw Co., Newark, N. J.

Simonds Mfg. Co., Fitchburg, Mass.

**Screws, Scissor and Shear—**

New Haven Machine Screw Co., New Haven, Ct.

Screw Machine Products Corporation, Providence, R. I.

**Screws, Shear—**

Hartford Machine Screw Co., Hartford, Ct.

**Screws, Shoulder—**

Hartford Machine Screw Co., Hartford, Ct.

New Haven Machine Screw Co., New Haven, Ct.

Screw Machine Products Corporation, Providence, R. I.

**Screws, Shutter, Store Door—**

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Screws, Skein—**

(See Screws, Coach and Lag.)

**Screws, Soft Expansion Machine, Electricians' and Plumbers'—**

A. C. Seaman 1638 Hutchinson St., Philadelphia, Pa.

**Screws, Special—**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Atlas Bolt & Screw Co., Cleveland, O.

Wallace Barnes Co., Bristol, Ct.

Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

Blake & Johnson Co., Waterbury, Ct.

Detroit Screw Works, Detroit, Mich.

Hanson Bros., Plainville, Ct.

Hartford Machine Screw Co., Hartford, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Harvey Hubbell, Bridgeport, Ct.

Franklin S. Miles Co., 205 Quarry St., Philadelphia, Pa.

National-Acme Mfg. Co., Cleveland, O.

National Cycle Mfg. Co., Bay City, Mich.

New Haven Machine Screw Co., New Haven, Ct.

Pawtucket Mfg. Co., Pawtucket, R. I.

Philadelphia Machine Screw Works, 624-626 Race St., Philadelphia, Pa.

Progressive Mfg. Co., Torrington, Ct.

Jas. Reynolds Mfg. Co., New Haven, Ct.

Rhode Island Tool Co., Providence, R. I.

Arthur T. Rutter & Co., 256 Broadway, New York.

Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

F. H. Smith Mfg. Co., 18-30 W. Randolph St., Chicago, Ill.

I. S. Spencer's Sons, Guilford, Ct.

Universal Machine Screw Co., Hartford, Ct.

L. T. Weiss, Brooklyn, N. Y.

F. E. Wells & Sons Co., Greenfield, Mass.

**Screws, Stop, Window Head—**

National Mfg. Co., Sterling, Ill.

**Screws, Thumb—**

Chas. H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.

Blake & Johnson Co., Waterbury, Ct.

Chicago Screw Co., 2 No. Canal St., Chicago, Ill.

Detroit Screw Works, Detroit, Mich.

Hartford Machine Screw Co., Hartford, Ct.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Keystone Drop Forge Works, Chester, Pa.



Franklin S. Miles Co., 205 Quarry St., Philadelphia, Pa.  
Parker Wire Goods Co., Worcester, Mass.  
Whitman & Barnes Mfg. Co., Chicago, Ill.

J. H. Williams & Co., Brooklyn, N. Y.  
Wire Goods Co., Worcester, Mass.  
Wrightsville Hardware Co., Wrightsville, Pa.

### **Screws, Watch, Clock and Optical—**

Hartford Machine Screw Co., Hartford, Ct.  
Screw Machine Products Corporation, Providence, R. I.

### **Screws, Wood, Iron, Brass, &c.—**

American Screw Co., Providence, R. I.  
Eagle Lock Co., Terryville, Ct.  
C. E. Jennings & Co., 42 Murray St., New York

Chas. Parker Co., Meriden, Ct.  
Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

Reed & Prince Mfg. Co., Worcester, Mass.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

Wire Goods Co., Worcester, Mass.

**Scribers, Metal—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

L. S. Starrett Co., Athol, Mass.

**Scribes, Timber—**  
Bemis & Call Hardware & Tool Co., Springfield, Mass.

**Scroll Chucks—**  
(See Chucks, Lathe.)

**Scroll Saws and Scroll Saw**

**Blades—**  
(See Saws, Scroll, and Scroll Saw Blades.)

**Scrub Brushes—**  
(See Brushes, Whitewash, Horse, &c.)

**Scuffle Hoes—**  
(See Hoes, Scuffle.)

**Scythe Stones—**  
(See Stones.)

**Scythes—**

Cronk & Carrier Mfg. Co., Elmira, N. Y.  
North Wayne Tool Co., Hallowell, Me.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Seal Presses—**  
(See Presses, Seal.)

**Seals, Case—**  
Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago Ill.

**Seals, Machinery for Making Car—**

E. W. Bliss Co., Brooklyn, N. Y.  
Consolidated Press & Tool Co., Hastings, Mich.

**Seals, Notary, Lodge, Corporation, &c.—**

Geo. M. Ness, Jr., 61 Fulton St., New York.

**Seals, Sealing Devices, &c.—**  
Theo. Hertz Metal Co., St. Louis, Mo.  
R. Woodman Mfg. & Supply Co., Boston.

**Seals, Strap—**

Cary Mfg. Co., 19-21 Roosevelt St., N. Y.

**Search Light Parts—**  
(See Automobile Parts.)

**Seals, Buggy, Third—**

Fernald Mfg. Co., North East, Pa.

Richards Mfg. Co., Aurora, Ill.

**Seats, Glass Valve—**  
F. E. Myers & Bro., Ashland, O.

**Seats, Pressed Steel—**  
Avery Stamping Co., Cleveland, O.  
Thomas Steel Co., Niles, O.  
Youngstown Iron & Steel Roofing Co., Youngstown, O.

**Second Hand Machinery—**  
American Tool Works Co., Cincinnati, O.  
Badger State Machine Co., Janesville, Wis.

Baird Machinery Co., Pittsburgh, Pa.  
W. R. Beatty Machinery & Equipment Co., Pittsburgh, Pa.

Chas. Behlen, 72 Trinity Place, N. Y.  
George Bender, 82 Centre St., New York.  
Bovaird & Co., Bradford, Pa.

L. I. Bregman & Co., First National Bank Bldg., Chicago, Ill.

Brown & Zortman Machinery Co., Pittsburgh, Pa.

Brownell Machinery Co., Providence, R. I.  
Carlin Machinery & Supply Co., Inc., N. S. Pittsburgh, Pa.

Chicago House Wrecking Co., W. 35th and Iron Sts., Chicago, Ill.

Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.

T. P. Conard & Co., 119 So. 4th St., Philadelphia, Pa.

R. M. Cunliffe, 11th St. and Washington Ave., Philadelphia, Pa.

Eagle Metal & Supply Co., Brooklyn, N. Y.

E. L. Essley Machinery Co., 67 W. Washington St., Chicago, Ill.

B. M. Everson, Pittsburgh, Pa.

Garvin Machine Co., Spring & Varick Sts., New York.

Hannon-Finton Co., Springfield, Mass.

Hill, Clarke & Co., Boston, Mass.

Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.

Henry A. Hittner's Son Co., Huntington St. and Aramingo Ave., Philadelphia, Pa.

Industrial Supply & Equipment Co., 407 Sansom St., Philadelphia, Pa.

W. C. Johnson & Sons Machinery Co., St. Louis, Mo.

Lodge & Shipley Machine Tool Co., Cincinnati, O.

J. J. McCabe, 14 Dey St., New York.

McCabe Machine Co., 95 Liberty St., New York.

McCoy & Brandt, Pittsburgh, Pa.

McDowell & Co., Allegheny, Pa.

McDowell, Stocker & Co., 69-61 So. Canal St., Chicago, Ill.

MacGovern, Archer & Co., 114 Liberty St., New York.

W. G. McKenney & Co., Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Marshall & Hunschart Machine Co., 62 64 So. Canal St., Chicago, Ill.

Henry J. Miller's Sons, Bridgewater, Mass.

Edgar M. Moore & Co., Pittsburgh, Pa.

Motch & Merryweather Machinery Co., Cleveland, O.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

Norton Machinery Co., Cincinnati, O.

Frank L. Patterson & Co., 26 Cortlandt St., New York.  
 Perkins & Frecker, 136 Liberty St., N. Y.  
 Pfannmueller Engineering Co., First National Bank Bldg., Chicago, Ill.  
 F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
 Plitt & Co., Real Estate Trust Bldg., Philadelphia, Pa.  
 Power Equipment Co., Fisher Bldg., Chicago, Ill.  
 Pratt & Whitney Co., Hartford, Ct.  
 Prentiss Tool & Supply Co., 115 Liberty St., New York.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 F. P. Schielein Machinery Co., Pittsburgh, Pa.  
 A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.  
 Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.  
 L. F. Seyfert's Sons, Inc., 437 No. 3d St., Philadelphia, Pa.  
 Shook & Fletcher, Birmingham, Ala.  
 Southern Iron & Equipment Co., Atlanta, Ga.  
 H. A. Stocker Machinery Co., 85 W. Randolph St., Chicago, Ill.  
 Syracuse Supply Co., Syracuse, N. Y.  
 Thomas & Lowe Machinery Co., Providence, R. I.  
 Frank Toomey, 127-131 No. 3d St., Philadelphia, Pa.  
 Jacob Ullman, Buffalo, N. Y.  
 Vandyck Churchill Co., 8 Dey St., N. Y.  
 Walsh's Sons & Co., Newark, N. J.  
 A. O. Wainworth & Co., 113-147 Clinton St., Chicago, Ill.  
 A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.  
 Wickes Bros., Saginaw, Mich.  
 C. C. Wormer Machinery Co., Detroit.  
 Yarsley & Levene, 305 N. 3d St., Philadelphia, Pa.

**Section Liners—**  
 (See Liners, Section.)

**Seed Cases, Sowers—**  
 (See Cases, Sowers.)

**Seeders, Broadcast—**  
 S. Freeman & Sons Mfg. Co., Racine, Wis.  
 Humphrey & Sons, Joliet, Ill.

**Seeders, Cherry—**  
 (See Stoners, Cherry.)

**Seeders, Raisin—**  
 Enterprise Mfg. Co., of Pa., Philadelphia, Pa.  
 Landers, Frary & Clark, New Britain, Ct.

**Segments, Commutator—**  
 (See Commutator Bars and Segments.)

**Selling Agents, Hardware—**  
 (See Agents, Hardware Manufacturers.)

**Separators, Cream, Parts for—**  
 Crosby Co., Buffalo, N. Y.  
 John R. Keim Mills, Inc., Buffalo, N. Y.  
 Keystone Drop Forge Works, Chester, Pa.  
 Worcester Pressed Steel Co., Worcester, Mass.

**Separators, Magnetic—**  
 Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.  
 J. W. Paxson Co., 1021 No. Delaware Ave., Philadelphia, Pa.

**Separators, Oil—**  
 American Tool & Machine Co., Boston, Mass.  
 American Tool Works Co., Cincinnati, O.  
 Burt Mfg. Co., Akron, O.  
 Harrison Safety Boiler Works, 3194 N. 17th St., Philadelphia, Pa.  
 Hawley Down Draft Furnace Co., Chicago, Ill.  
 Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
 Frank L. Patterson & Co., 26 Cortlandt St., New York.  
 Worcester Oil Extractor Co., Worcester, Mass.

**Separators, Steam—**  
 Exeter Machine Works, Exeter, N. H.  
 Harrison Safety Boiler Works, 3194 N. 17th St., Philadelphia, Pa.  
 Hawley Down Draft Furnace Co., Chicago, Ill.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.  
 W. H. Nicholson & Co., Wilkes-Barre, Pa.  
 Frank L. Patterson & Co., 26 Cortlandt St., New York.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
 Ritter-Conley Mfg. Co., Pittsburgh, Pa.  
 Whitlock Coil Pipe Co., Hartford, Ct.

**Separators, Water, Rubber, Reclaiming—**  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Servers, Salad—**  
 American Cutlery Co., Chicago, Ill.

**Set Screws—**  
 (See Screws, Cap and Set.)

**Sets, Assorted Lathe Tool and Fixture—**  
 O. K. Tool Holder Co., Shelton, Ct.

**Sets, Brad—**  
 L. S. Starrett Co., Athol, Mass.

**Sets, Cellar, Window—**  
 National Mfg. Co., Sterling, Ill.

**Sets, Child's Kitchen Carving—**  
 Landers, Frary & Clark, New Britain, Ct.

**Sets, Combination—**  
 L. S. Starrett Co., Athol, Mass.

**Sets, Communion, Silver and Silver Plated—**  
 International Silver Co., Meriden, Ct.

**Sets, Cobblers—**  
 (See Cobblers' Outfits.)

**Sets, Door, Screen and Storm—**  
 Lawrence Bros., Sterling, Ill.  
 McKinney Mfg. Co., Allegheny, Pa.

**Sets, Cellar, Window—**  
 National Mfg. Co., Sterling, Ill.

**Sets, Engineers' Oilers—**  
 (See Oilers, Engine.)

**Sets, Garden Tool—**  
 American Fork & Hoe Co., Cleveland, O.  
 Arcade Mfg. Co., Freeport, Ill.  
 Wrightsville Hardware Co., Wrightsville, Pa.

**Sets, Hook—**  
 Eyelet Tool Co., Boston, Mass.

**Sets, Kitchen—**  
 Arcade Mfg. Co., Freeport, Ill.

**Sets, Nail—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

Buck Bros., Millbury, Mass.  
Elmore Tool Mfg. Co., Hartford, Ct.  
Goodell-Pratt Co., Greenfield, Mass.  
Hartford Machine Screw Co., Hartford, Ct.

Irwin Auger Bit Co., Wilmington, O.  
C. F. Jennings & Co., 42 Murray St., N. Y.  
Keystone Mfg. Co., Buffalo, N. Y.  
Kilbourn & Bishop Co., New Haven, Ct.  
Massachusetts Saw Works, Chicopee, Mass.

H. H. Mayhew Co., Shelburne Falls, Mass.

Snell Mfg. Co., Fiskdale, Mass.  
Stanley Rule & Level Co., New Britain, Ct.

L. S. Starrett Co., Athol, Mass.  
Storm Mfg. Co., Newark, N. J.  
Tuck Mfg. Co., Brockton, Mass.

**Sets, Nail, Non-Jarring—**  
Exclet Tool Co., Boston, Mass.

**Sets, Rivet—**  
Exclet Tool Co., Boston, Mass.  
Irvington Mfg. Co., Irvington, N. J.  
Niagara Machine & Tool Co., Buffalo, N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Sets, Saw—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Bergman Tool Mfg. Co., Buffalo, N. Y.  
Henry Disston & Sons, Philadelphia, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
John H. Graham & Co., 113 Chambers St., New York.

Kilbourn & Bishop Co., New Haven, Ct.  
F. E. Kohler & Co., Canton, O.  
Chas. Merrill, 277 Broadway, N. Y.  
National Saw Co., Newark, N. J.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Simonds Mfg. Co., Fitchburg, Mass.  
Seymour Smith & Son, Oakville, Ct.  
Taintor Mfg. Co., 113 Chambers St., N. Y.

**Sets, Screw Driver and Tool—**

John S. Fray & Co., Bridgeport, Ct.  
Goodell-Pratt Co., Greenfield, Mass.  
Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

Millers Falls Co., 28 Warren St., N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Sets, Soldering—**  
Arcade Mfg. Co., Freeport, Ill.  
W. L. Barrett, Bristol, Ct.  
Millers Falls Co., 28 Warren St., N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Universal Fluxing Co., Urbana, O.

**Sets, Tea, Coffee, Curling, Manicure, Smokers', &c.—**

**Silver and Silver Plated—**  
International Silver Co., Meriden, Ct.

**Sets, Tool, Hollow Handle—**  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

John S. Fray & Co., Bridgeport, Ct.  
Goodell-Pratt Co., Greenfield, Mass.  
C. F. Jennings & Co., 42 Murray St., N. Y.  
Millers Falls Co., 28 Warren St., N. Y.

**Settees, Lawn—**  
(See Chairs and Settees, Lawn.)

**Setting and Filing Machines, Saw—**

E. C. Atkins & Co., Indianapolis, Ind.  
Detrick & Harvey Machine Co., Baltimore, Md.

Henry Disston & Sons, Philadelphia, Pa.  
Hess Machine Works, 25th & Callowhill Sts., Philadelphia, Pa.

**Setting and Filing Machines, Band Saw—**

Crescent Machine Co., Leetonia, O.  
New Britain Machine Co., New Britain, Ct.

**Setting Machines, Shoe Lace Hook—**

Judson L. Thomson Mfg. Co., Waltham, Mass.

**Sewer Castings—**  
(See Iron Work, Builders'.)

**Sewer Connections—**  
(See Boots.)

**Sewer Gratings—**  
(See Iron Work, Builders'.)

**Sewer Traps—**  
Kennedy Valve Mfg. Co., 57 Beekman St., New York.

**Sewing Machines—**  
National Sewing Machine Co., Belvidere, Ill.

**Sextants—**  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
Riggs & Bro., 310 Market St., Philadelphia, Pa.

**Shackles, Chain—**  
Thomas Laughlin Co., Portland, Me.  
W. W. Patterson Co., Pittsburgh, Pa.  
Standard Chain Co., Pittsburgh, Pa.

**Shackles, Guy Rope—**  
A. Leschen & Sons Rope Co., St. Louis, Mo.

**Shackles, Shaft, Safety—**  
A. Leschen & Sons Rope Co., St. Louis, Mo.

**Shackles, Tackle Block—**  
Boston & Lockport Block Co., East Boston, Mass.

**Shade Cord—**  
(See Cord, Shade and Ventilator.)

**Shade Pulleys—**  
(See Pulleys, Shade.)

**Shades, Metal, Electric Light—**

Boston Pressed Metal Co., Worcester, Mass.

Otto Konigsloew Mfg. Co., Cleveland, O.

**Shaft Adjusters, Hangers, &c.—**  
(See Adjusters, Hangers, &c.)

**Shaft Levels—** (See Levels, Shaft.)

**Shaft Straightening Machinery—**

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Bradford Mach. Tool Co., Cincinnati, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

Watson-Stillman Co., 50 Church St., N. Y.

Wickes Bros., Saginaw, Mich.

**Shaft Trimmings, Leather—**  
(See Trimmings, Shaft, Leather.)

**Shafting—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

American Tool & Machine Co., Boston, Mass.

Bethlehem Steel Co., So. Bethlehem, Pa.  
Birmingham Iron Foundry, Derby, Ct.  
Cleveland City Forge & Iron Co., Cleveland, O.

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Falls Hollow Staybolt Co., Cuyahoga Falls, O.

Farrel Foundry & Mach. Co., Ansonia, Ct.

Fawcett Machine Co., Pittsburgh, Pa.

Jeffrey Mfg. Co., Columbus, O.

Jones & Laughlin Steel Co., Pittsburgh, Pa.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

Mesta Machine Co., Pittsburgh, Pa.

Pennsylvania Forge Co., Philadelphia, Pa.

Pennsylvania Shafting Co., Spring City, Pa.

Poole Engineering & Machine Co., Baltimore, Md.

Republic Iron & Steel Co., Pittsburgh, Pa.

Sundberg, Kropp & Co., 1121-1131 W. 21st St., Chicago, Ill.

Tindel-Morris Co., Eddystone, Pa.

Warsaw Elevator Co., Warsaw, N. Y.

Webster Mfg. Co., 1075-1111 W. 15th St., Chicago, Ill.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.

Bourne-Fuller Co., Cleveland, O.

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. E. Caldwell Co., Louisville, Ky.

Charter Gas Engine Co., Sterling, Ill.

W. P. Davis Machine Co., Rochester, N. Y.

Denman & Davis, 85-91 Lafayette St., New York.

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

Dodge Mfg. Co., Mishawaka, Ind.

Barclay M. Everson, Pittsburgh, Pa.

Falls Rivet & Machine Co., Cuyahoga Falls, O.

Arthur C. Harvey Co., Boston, Mass.

C. B. Houston & Co., Girard Bldg., Philadelphia, Pa.

Humphrey Machine Co., Keene, N. H.

Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.

Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.

North Works, Illinois Steel Co., Chicago, Ill.

F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

Pierson & Co., 29 Broadway, New York.

Horace T. Potts & Co., 316-320 N. 3d St., Philadelphia, Pa.

Joseph T. Eyerson & Son, 18 Milwaukee Ave., Chicago, Ill.

A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.

L. F. Seyfert's Sons, Inc., 437-441 No. 3d St., Philadelphia, Pa.

Charles G. Stevens Co., 60 So. Canal St., Chicago, Ill.

Walsh's Sons & Co., Newark, N. J.

Edgar T. Ward & Sons, Boston, Mass.

Wickes Bros., Saginaw, Mich.

Woodward, Wight & Co., Ltd., New Orleans, La.

**Shafting, Cold Drawn—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Fitzsimons Co., Youngstown, O.

C. Pardee Works, Perth Amboy, N. J.

Pennsylvania Shafting Co., Spring City, Pa.

**Shaftings, Cold Drawn, Flats, Squares and Hexagons—**

Cumberland Steel Co., Cumberland, Md.

**Shafting Collars, Oilers—**  
(See Collars, Oilers.)

**Shafting, Hollow, Charcoal, Iron and Steel—**

Falls Hollow Staybolt Co., Cuyahoga Falls, O.

Pennsylvania Forge Co., Philadelphia, Pa.

**Shafting, Polished—**

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Fitzsimons Co., Youngstown, O.

C. Pardee Works, Perth Amboy, N. J.

**Shafting, Turned and Ground—**

Cumberland Steel Co., Cumberland, Md.

**Shafts, Automobile Crank—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

Tindel-Morris Co., Eddystone, Pa.

**Shafts, Cement Mill—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Shafts, Chrome Nickel Steel Crank—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

Tindel-Morris Co., Eddystone, Pa.

A. P. Witteman & Co., 1223 Spring St., Philadelphia, Pa.

**Shafts, Crank—**

Bancroft & Co., Philadelphia, Pa.

Bethlehem Steel Co., So. Bethlehem, Pa.

Carnegie Steel Co., Pittsburgh, Pa.

Chrome Steel Works, Chrome, N. J.

Cleveland City Forge & Iron Co., Cleveland, Ohio.

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Keystone Drop Forge Works, Chester, Pa.

Pennsylvania Forge Co., Philadelphia, Pa.

Poole Engineering & Machine Co., Baltimore, Md.

Thomas Prosser & Son, 26 Platt St., N.Y.

Richmond Forgings Corporation, Richmond, Va.

Sundberg, Kropp & Co., 1121-1131 W. 21st St., Chicago, Ill.

Tindel-Morris Co., Eddystone, Pa.

Vulcan Iron Works, 28 No. Irving Ave., Chicago, Ill.

A. P. Witteman & Co., 1223 Spring St., Philadelphia, Pa.

Wyman & Gordon, Worcester, Mass.

**Shafts, Flexible—**

Chicago Flexible Shaft Co., 124 La Salle Ave., Chicago, Ill.

Coates Clipper Mfg. Co., Worcester, Mass.

Gem Mfg. Co., Pittsburgh, Pa.  
 Stow Flexible Shaft Co., 26th and Callow-  
 hill Sts., Philadelphia, Pa.  
 Stow Mfg. Co., Binghamton, N. Y.

#### Shafts, Forged—

Bethlehem Steel Co., So. Bethlehem, Pa.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Chrome Steel Works, Chrome, N. J.  
 Cleveland City Forge & Iron Co., Cleve-  
 land, O.

Columbia Steel & Shafting Co., Pitts-  
 burgh, Pa.

Pennsylvania Forge Co., Philadelphia, Pa.  
 Thomas Prosser & Son, 26 Platt St., N. Y.  
 Sundberg, Kropp & Co., 1121-1131 W.  
 21st St., Chicago, Ill.

A. P. Witteman & Co., 1223 Spring St.,  
 Philadelphia, Pa.

#### Shafts, Phosphor Bronze—

Phosphor-Bronze Smelting Co. Ltd., 2200  
 Washington Ave., Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.

#### Shafts, Rough Turned—

Pennsylvania Forge Co., Philadelphia, Pa.  
 Thomas Prosser & Son, 26 Platt St., N. Y.

#### Shafts, Slip or Telescope—

Gem Mfg. Co., Pittsburgh, Pa.

#### Shakers, Drink—

Erie Specialty Co., Erie, Pa.  
 Hero Fruit Jar Co., East Letterly St.,  
 Philadelphia, Pa.

#### Shakers, Salt—

(See Peppers and Salts.)

#### Shakers, Stone—

S. Cheney & Son, Manlius, N. Y.  
 Wrightsville Hardware Co., Wrightsville,  
 Pa.

#### Shank Machinery, Steel—

Henry Perkins Co., Bridgewater, Mass.

#### Shapers—

American Tool Works Co., Cincinnati, O.  
 Cincinnati Shaper Co., Cincinnati, O.  
 Crescent Machine Co., Leetonia, O.  
 Garvin Machine Co., Spring and Varick  
 Sts., New York.

Gould & Eberhardt, Newark, N. J.  
 Hendey Machine Co., Torrington, Ct.  
 Morton Mfg. Co., Muskegon Heights,  
 Mich.

New Haven Mfg. Co., New Haven Ct.  
 Newton Machine Tool Works, 23d & Vine  
 Sts., Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway,  
 New York.

Potter & Johnston Machine Co., Paw-  
 tucket, R. I.

Stockbridge Machine Co., Worcester,  
 Mass.

Taylor Machinery Co., Boston, Mass.

#### MERCHANTS.

Baird Machinery Co., Pittsburgh, Pa.  
 W. R. Beatty Machinery & Equipment  
 Co., Pittsburgh, Pa.

Brown & Zortman Machinery Co., Pitts-  
 burgh, Pa.

Hill, Clarke & Co., Boston, Mass.  
 W. C. Johnson & Sons Machinery Co.,  
 St. Louis, Mo.

McDowell, Stocker & Co., 59 S. Canal  
 St., Chicago, Ill.

J. J. McCabe, 14 Dey St., New York.

Manning, Maxwell & Moore, Inc., 85-89  
 Liberty St., New York.

Marshall & Huschart Machinery Co.,  
 62-64 So. Canal St., Chicago, Ill.

Motch & Merryweather Machinery Co.,  
 Cleveland, O.

Prentiss Tool & Supply Co., 115 Liberty  
 St., New York.

L. F. Seyfert's Sons, Inc., 437-441 No. 3d  
 St., Philadelphia, Pa.

H. A. Stocker Machinery Co., 85 W.  
 Randolph St., Chicago, Ill.

Frank Toomey, 127-131 N. 3d St., Phila-  
 delphia, Pa.

Jacob Ullman, Buffalo, N. Y.

Vandyck Churchill Co., 8 Dey St., N. Y.

A. D. White Machinery Co., 39-41 S.  
 Canal St., Chicago, Ill.

Wickes Bros., Saginaw, Mich.

C. C. Wormer Machinery Co., Detroit,  
 Mich.

**Shapers, Attachments for—**  
 Stockbridge Machine Co., Worcester, Mass.

**Shapers, Draw-Cut Iron—**  
 Manning, Maxwell & Moore, Inc., 85 Lib-  
 erty St., New York.

Morton Mfg. Co., Muskegon Heights,  
 Mich.

**Shapers, Open Side—**  
 Cincinnati Shaper Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85 Lib-  
 erty St., New York.

**Shapers, Spindle—**  
 Advance Machinery Co., Toledo, O.

**Shapers, Traverse, Single  
 or Double Head—**  
 Cincinnati Shaper Co., Cincinnati, O.

Hendey Machine Co., Torrington, Ct.

Manning, Maxwell & Moore, Inc., 85 Lib-  
 erty St., New York.

Morton Mfg. Co., Muskegon Heights,  
 Mich.

Newton Machine Tool Works, 23 and  
 Vine Sts., Philadelphia, Pa.

Niles-Bement-Pond Co., 111 Broadway,  
 New York.

**Shapers, Universal—**  
 Potter & Johnston Machine Co., Paw-  
 tucket, R. I.

**Shapers, Agricultural—**  
 Avery Stamping Co., Cleveland, O.

Interstate Iron & Steel Co., First Na-  
 tional Bank Bldg., Chicago, Ill.

Jones & Laughlin Steel Co., Pittsburgh.

Republic Iron & Steel Co., Pittsburgh, Pa.

**Shapers, Cold Drawn—**  
 Avery Stamping Co., Cleveland, O.

American Steel & Wire Co., Commercial  
 National Bank Bldg., Chicago, Ill.

Columbia Steel & Shafting Co., Pitts-  
 burgh, Pa.

Fitzsimons Co., Youngstown, O.

Kidd Bros. & Burgher Steel Wire Co.,  
 Aliquippa, Pa.

Otto Konigsow Mfg. Co., Cleveland, O.

C. Pardee Works, Perth Amboy, N. J.

Pennsylvania Shafting Co., Spring City,  
 Pa.

**Shapers, Cold Drawn and  
 Polished—**  
 Columbia Steel & Shafting Co., Pitts-  
 burgh, Pa.

Fitzsimons Co., Youngstown, O.

John R. Keim Mills, Inc., Buffalo, N. Y.

Kidd Bros. & Burgher Steel Wire Co.,  
 Aliquippa, Pa.

**Shapes, Pressed Steel—**  
American Pulley Co., 29th and Bristol  
Sts., Philadelphia, Pa.  
Avery Stamping Co., Cleveland, O.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Boston Pressed Metal Co., Worcester,  
Mass.  
John R. Keim Mills, Inc., Buffalo, N. Y.  
Keystone Steel Co., Wilmington, Del.  
Otto Konigslow Mfg. Co., Cleveland, O.  
H. A. Matthews Mfg. Co., Seymour, Ct.  
Pennsylvania Shafting Co., Spring City,  
Pa.  
Pressed Steel Tank Co., Milwaukee, Wis.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Thomas Steel Co., Niles, O.

**Shapes, Sheet Steel, Cut to  
Order—**  
Avery Stamping Co., Cleveland, O.  
Janney, Steinmetz & Co., Philadelphia,  
Pa.  
R. C. Jenkinson & Co., Newark, N. J.  
Thomas Steel Co., Niles, O.  
Worcester Pressed Steel Co., Worcester,  
Mass.

**Shapes, Special, High Car-  
bon Steel—**  
Avery Stamping Co., Cleveland, O.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Fitzsimons Co., Youngstown, O.  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.

**Sharpeners, Dowel—**  
Stanley Rule & Level Co., New Britain, Ct.

**Sharpeners, Knife—**  
American Emery Wheel Works, Provi-  
dence, R. I.  
Arcade Mfg. Co., Freeport, Ill.  
Carborundum Co., Niagara Falls, N. Y.  
Millers Falls Co., 28 Warren Street,  
New York.

**Sharpeners, Lawn Mower—**  
Osborn Mfg. Co., Cleveland, O.

**Sharpeners, Metal Saw, Auto-  
matic—**  
Covel Mfg. Co., Fisher Bldg., Chicago,  
Ill.

**Sharpeners, Rock Drill  
Steel—**  
Ingersoll-Rand Co., 11 Broadway, N. Y.

**Sharpeners, Saw—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Covel Mfg. Co., Fisher Bldg., Chicago,  
Ill.

**Sharpeners, Saw, Auto-  
matic—**  
E. C. Atkins Co., Indianapolis, Ind.  
Espan-Lucas Machine Works, Broad and  
Noble Sts., Philadelphia, Pa.

**Sharpeners, Skate—**  
Osborn Mfg. Co., Cleveland, O.  
Pike Mfg. Co., Pike, N. H.

**Shavers and Slotters, Wood  
Screw—**  
Ass. S. Cook Co., Hartford, Ct.

**Shavers, Beef—**  
(See Cutters, Smoked Beef.)

**Shavers, Ice—**  
(See Ice Harvesting Tools.)

**Shavers, Coopers—**  
L. & I. J. White Co., Buffalo, N. Y.

**Shaves, Ice—**  
Arcade Mfg. Co., Freeport, Ill.  
Enterprise Mfg. Co. of Pa., Philadelphia,  
Pa.  
Erie Specialty Co., Erie, Pa.  
North Bros. Mfg. Co., Philadelphia, Pa.  
L. & I. J. White Co., Buffalo, N. Y.  
Wrightsville Hardware Co., Wrightsville,  
Pa.

**Shaves, Spoke—**  
Chapin-Stephens Co., Pine Meadow, Ct.  
Goodell-Pratt Co., Greenfield, Mass.  
Millers Falls Co., 28 Warren St., N. Y.  
Seymour Smith & Son, Oakville, Ct.  
Stanley Rule & Level Co., New Britain,  
Ct.

**Union Mfg. Co., New Britain, Ct.  
L. & I. J. White Co., Buffalo, N. Y.**

**Shaves, Tobacco—**  
Landers, Frary & Clark, New Britain, Ct.  
North Bros. Mfg. Co., Philadelphia, Pa.

**Shaving Cups, Silver  
Plated—**  
(See Cups, Children's, Shaving, Silver  
Plated.)

**Shaving Machines, Screw—**  
Garvin Machine Co., Spring & Varick  
Sts., New York.

**Hartford Machine Screw Co., Hartford, Ct.  
Pratt & Whitney Co., Hartford, Ct.**

**Shavings, Steel—**  
American Steel Wool Mfg. Co., 451  
Greenwich St., New York.

**Shawl Strap Handles—**  
(See Baggage Hardware.)

**Shear Blades, Metal—**  
(See Blades, Metal Shear.)

**Shear, Steel, Double—**  
(See Steel, Double Shear.)

**Shearing Machines, Hand—**  
Armstrong-Blum Mfg. Co., 109 N. Fran-  
cisco Ave., Chicago, Ill.

**Badger State Machine Co., Janesville,  
Wis.**

**Bertsch & Co., Cambridge City, Ind.  
Buffalo Forge Co., Buffalo, N. Y.**

**Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.**

**New Doty Mfg. Co., Janesville, Wis.  
Niagara Machine & Tool Works, Buf-  
falo, N. Y.**

**Niles-Bement-Pond Co., 111 Broadway,  
New York.**

**Schatz Mfg. Co., Chappaqua, N. Y.  
Watson-Stillman Co., 50 Church St.,  
New York.**

**Shearing Metal—**  
(See Sheet Metal Work.)

**Shears, Alligator—**  
Badger State Machine Co., Janesville,  
Wis.

**Birmingham Iron Foundry, Derby, Ct.  
Thomas Carlin's Sons Co., N. S. Pitts-  
burgh, Pa.**

**Cleveland Punch & Shear Works Co.,  
Cleveland, O.**

**Excelsior Tool & Machine Co., E. St.  
Louis, Ill.**

**A. Garrison Foundry Co., Pittsburgh, Pa.  
Hilles & Jones Co., Wilmington, Del.**

**Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.**

**Mesta Machine Co., Pittsburgh, Pa.  
Morgan Engineering Co., Alliance, O.**

National Machinery Co., Tiffin, O.  
 New Doty Mfg. Co., Janesville, Wis.  
 Philadelphia Roll & Machine Co., 23d St.  
 & Washington Ave., Philadelphia, Pa.  
 United Engineering & Foundry Co.,  
 Pittsburgh, Pa.  
 Waterbury Farrel Foundry & Machine  
 Co., Waterbury, Ct.  
 Watson-Stillman Co., 50 Church St.,  
 New York.

Wickes Bros., Saginaw, Mich.

#### **Shears and Scissors—**

Acme Shear Co., Bridgeport, Ct.  
 Atlas Shear Co., Bridgeport, Ct.  
 Bridgeport Hardware Mfg. Co., Bridge-  
 port, Ct.

Clauss Shear Co., Fremont, O.  
 W. H. Compton Shear Co., Newark, N. J.  
 Cronk & Carrier Mfg. Co., Elmira, N. Y.  
 R. Heinisch's Sons Co., Newark, N. J.  
 Adolph Kastor & Bros., 109 Duane St.,  
 New York.

Wiebusch & Hilger, Ltd., 106-110 Lafay-  
 ette St., New York.

(See also Scissors.)

#### **Shears and Snips, Dental—**

Clauss Shear Co., Fremont, O.  
 W. H. Compton Shear Co., Newark, N. J.  
 R. Heinisch's Sons Co., Newark, N. J.  
 Schuchardt & Schutte, 90 West St., N. Y.  
 Wiebusch & Hilger, Ltd., 106-110 Lafay-  
 ette St., New York.

#### **Shears and Snips, Tinner's—**

Acme Shear Co., Bridgeport, Ct.  
 Atlas Shear Co., Bridgeport, Ct.  
 Badger State Machine Co., Janesville,  
 Wis.

Bergman Tool Mfg. Co., Buffalo, N. Y.  
 Bridgeport Hardware Mfg. Co., Bridge-  
 port, Ct.

Clauss Shear Co., Fremont, O.  
 W. H. Compton Shear Co., Newark, N. J.  
 R. Heinisch's Sons Co., Newark, N. J.  
 Kilborn & Bishop Co., New Haven, Ct.  
 Niagara Machine & Tool Works, Buffalo,  
 N. Y.

Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.

Wiebusch & Hilger, Ltd., 106-110 Lafay-  
 ette St., New York.

#### **Shears, Bankers' and Paper Hangers—**

Acme Shear Co., Bridgeport, Ct.  
 Atlas Shear Co., Bridgeport, Ct.  
 Clauss Shear Co., Fremont, O.  
 W. H. Compton Shear Co., Newark, N. J.  
 R. Heinisch's Sons Co., Newark, N. J.  
 Wiebusch & Hilger, Ltd., 106-110 Lafay-  
 ette St., New York.

#### **Shears, Barbers'—**

Acme Shear Co., Bridgeport, Ct.  
 Atlas Shear Co., Bridgeport, Ct.  
 Bridgeport Hardware Mfg. Co., Bridge-  
 port, Ct.

Clauss Shear Co., Fremont, O.  
 W. H. Compton Shear Co., Newark, N. J.  
 R. Heinisch's Sons Co., Newark, N. J.  
 Wiebusch & Hilger, Ltd., 106-110 Lafay-  
 ette St., New York.

#### **Shears, Beam and Channel—**

Alliance Machine Co., Alliance, O.  
 Armstrong-Blum Mfg. Co., 109 N. Fran-  
 cisco Ave., Chicago, Ill.  
 Badger State Machine Co., Janesville,  
 Wis.

Bertsch & Co., Cambridge City, Ind.  
 Cincinnati Punch & Shear Co., Cincin-  
 nati, O.

Cleveland Punch & Shear Works Co.,  
 Cleveland, O.

Hilles & Jones Co., Wilmington, Del.  
 Long & Allstatter Co., Hamilton, O.  
 Manning, Maxwell & Moore, Inc., 85  
 Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.  
 Morgan Engineering Co., Alliance, O.  
 New Doty Mfg. Co., Janesville, Wis.  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.

Royersford Foundry & Machine Co.,  
 Royersford, Pa.

Schatz Mfg. Co., Chappaqua, N. Y.  
 Schuchardt & Schutte, 90 West St., N. Y.  
 United Engineering & Foundry Co.,  
 Pittsburgh, Pa.

Watson-Stillman Co., 50 Church St.,  
 New York.

Wickes Bros., Saginaw, Mich.

Williams, White & Co., Moline, Ill.

#### **Shears, Belting—**

Clauss Shear Co., Fremont, O.  
 Schuchardt & Schutte, 90 West St., N. Y.

#### **Shears, Bent—**

Clauss Shear Co., Fremont, O.

#### **Shears, Candy—**

Clauss Shear Co., Fremont, O.  
 W. H. Compton Shear Co., Newark, N. J.  
 R. Heinisch's Sons Co., Newark, N. J.  
 Wiebusch & Hilger, Ltd., 106-110 Lafay-  
 ette St., New York.

#### **Shears, Carpet—**

(See Shears and Scissors.)

#### **Shears, Circular Metal—**

Adriance Machine Works, Brooklyn, N. Y.  
 Blake & Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.  
 Gould & Eberhardt, Newark, N. J.  
 R. Heinisch's Sons Co., Newark, N. J.  
 Manning, Maxwell & Moore, Inc., 85  
 Liberty St., New York.

Niagara Machine & Tool Works, Buf-  
 falo, N. Y.

Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.

Waterbury Farrel Foundry & Machine  
 Co., Waterbury, Ct.

Zeh & Hahnemann Co., Newark, N. J.

#### **Shears, Editors' or Desk—**

Clauss Shear Co., Fremont, O.  
 W. H. Compton Shear Co., Newark, N. J.  
 R. Heinisch's Sons Co., Newark, N. J.

#### **Shears, Electric—**

Morgan Construction Co., Worcester,  
 Mass.

Morgan Engineering Co., Alliance, O.  
 United Engineering & Foundry Co.,  
 Pittsburgh, Pa.

#### **Shears, Electricians'—**

Clauss Shear Co., Fremont, O.  
 R. Heinisch's Sons Co., Newark, N. J.

#### **Shears, Feltlock—**

(See Shears, Horse and Mule.)

#### **Shears, Flying—**

Morgan Construction Co., Worcester,  
 Mass.

#### **Shears, Fruit and Flower Gathering—**

Clauss Shear Co., Fremont, O.  
 Columbia Grey Iron Co., Columbia, Pa.

**Shears, Game or Bird—**  
Claus Shear Co., Fremont, O.  
**Landers, Frary & Clark, New Britain, Ct.**  
**Shears, Garden—**  
Claus Shear Co., Fremont, O.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.  
**Shears, Glass—**  
Claus Shear Co., Fremont, O.  
W. H. Compton Shear Co., Newark, N. J.  
R. Heinisch's Sons Co., Newark, N. J.  
**Shears, Glove—**  
Claus Shear Co., Fremont, O.  
**Shears, Glove Makers—**  
W. H. Compton Shear Co., Newark, N. J.  
**Shears, Grape—**  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
**Shears, Grass and Lawn—**  
Columbian Cutlery Co., Reading, Pa.  
Cronk & Carrier Mfg. Co., Elmira, N. Y.  
Geo. E. Gay, Augusta, Me.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.  
**Shears, Hand Power Beam—**  
Badger State Machine Co., Janesville, Wis.  
**Shears, Hat Trimming—**  
W. H. Compton Shear Co., Newark, N. J.  
**Shears, Hedge—**  
Columbian Cutlery Co., Reading, Pa.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.  
**Shears, Horse and Mule—**  
Claus Shear Co., Fremont, O.  
Columbian Cutlery Co., Reading, Pa.  
R. Heinisch's Sons Co., Newark, N. J.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.  
**Shears, Hydraulic—**  
Alliance Machine Co., Alliance, O.  
Rertsch & Co., Cambridge City, Ind.  
Chambersburg Engineering Co., Chambersburg, Pa.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
A. L. Hender's Sons, Wilmington, Del.  
Mackintosh, Hemphill & Co., Pittsburgh.  
Mesta Machine Co., Pittsburgh, Pa.  
Morgan Construction Co., Worcester, Mass.  
Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
United Engineering & Foundry Co., Pittsburgh, Pa.  
Watson-Stillman Co., 50 Church St., New York.  
Williams, White & Co., Moline, Ill.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.  
**Shears, Leather—**  
(See Shears, Leather, Rope and Rubber.)  
**Shears, Leather, Rope and Rubber—**  
Claus Shear Co., Fremont, O.  
W. H. Compton Shear Co., Newark, N. J.  
R. Heinisch's Sons Co., Newark, N. J.  
**Shears, Lopping—**  
(See Shears, Pruning.)  
**Shears, Metal, Hand—**  
Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
Badger State Machine Co., Janesville, Wis.  
E. M. Clough, Tolland, Ct.

Benjamin P. Forbes, Cleveland, O.  
Goodall-Pratt Co., Greenfield, Mass.  
Kimball Bros. & Sprague, Brockton, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Nappanee Iron Works, Nappanee, Ind.  
Novelty Iron Works, Dubuque, Ia.  
Schatz Mfg. Co., Chappaqua, N. Y.  
Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.  
**Shears, Metal, Portable—**  
Badger State Machine Co., Janesville, Wis.  
Schatz Mfg. Co., Chappaqua, N. Y.  
Schuchardt & Schutte, 90 West St., N. Y.  
**Shears, Metal Squaring and Circle—**  
Adriance Machine Works, Brooklyn, N. Y.  
Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
Rertsch & Co., Cambridge City, Ind.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Buffalo Forge Co., Buffalo, N. Y.  
Chandler & Farquhar Co., Boston, Mass.  
Cincinnati Punch & Shear Co., Cincinnati, O.  
Cleveland Punch & Shear Works Co., Cleveland, O.  
Consolidated Press & Tool Co., Hastings, Mich.  
Excelsior Tool & Machine Co., E. St. Louis, Ill.  
Ferracute Machine Co., Bridgeton, N. J.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
W. H. Hibbard Mfg. Co., Brooklyn, N. Y.  
Hilles & Jones Co., Wilmington, Del.  
R. E. Kidder, Worcester, Mass.  
Chas. Leffer & Co., Brooklyn, N. Y.  
Lewis Foundry & Machine Co., Groveton, Pa.  
Long & Allstatter Co., Hamilton, O.  
Mackintosh, Hemphill & Co., Pittsburgh.  
Mesta Machine Co., Pittsburgh, Pa.  
Morgan Engineering Co., Alliance, O.  
R. S. Newbold & Son Co., Norristown, Pa.  
New Doty Mfg. Co., Janesville, Wis.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
Niles-Bement-Pond Co., 111 Broadway, New York.  
George A. Ohl & Co., Newark, N. J.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Schatz Mfg. Co., Chappaqua, N. Y.  
Smith & Egge Mfg. Co., Bridgeport, Ct.  
United Engineering & Foundry Co., Pittsburgh, Pa.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.  
Watson-Stillman Co., 50 Church St., New York.  
Williams, White & Co., Moline, Ill.  
R. D. Wood & Co., 400 Chestnut St., Philadelphia, Pa.  
Zeh & Hahnemann Co., Newark, N. J.  
MERCHANTS.  
Baird Machinery Co., Pittsburgh, Pa.  
W. R. Beatty Machinery & Equipment Co., Pittsburgh, Pa.  
Barclay M. Everson, Pittsburgh, Pa.



Hill, Clarke & Co., Boston, Mass.  
 Irving Mfg. & Tool Co., 157 Chambers St.,  
 New York.  
 Manning, Maxwell & Moore, Inc., 85-89  
 Liberty St., New York.  
 Merchant & Evans Co., Philadelphia, Pa.  
 Motch & Merryweather Machinery Co.,  
 Cleveland, O.  
 F. R. Phillips & Sons Co., Pennsylvania  
 Bldg., Philadelphia, Pa.  
 Prentiss Tool & Supply Co., 115 Liberty  
 St., New York.  
 Joseph T. Ryerson & Son, 18-22 Milway-  
 kee Ave., Chicago, Ill.  
 Scully Steel & Iron Co., 69 N. Halsted  
 St., Chicago, Ill.  
 L. F. Seyfert's Sons, Inc., 437-441 No. 3d  
 St., Philadelphia, Pa.  
 Frank Toomey, 127-131 No. 3d St., Phil-  
 adelphia, Pa.  
 Vandyck, Churchill Co., 8 Dey St., N. Y.  
 A. D. White Machinery Co., 39-41 S.  
 Canal St., Chicago, Ill.  
 Wickes Bros., Saginaw, Mich.

**Shears, Paper Hangers'—**  
 (See Shears, Bankers')

**Shears, Plate—**  
 A. Garrison Foundry Co., Pittsburgh, Pa.  
**Shears, Plate Beveling—**  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Cincinnati Punch & Shear Co., Cincin-  
 nati, O.  
 Cleveland Punch & Shear Works Co.,  
 Cleveland, O.  
 Ferracute Machine Co., Bridgeton, N. J.  
 Hilles & Jones Co., Wilmington, Del.  
 Long & Allstatter Co., Hamilton, O.  
 Manning, Maxwell & Moore, Inc., 85  
 Liberty St., New York.  
 New Doty Mfg. Co., Janesville, Wis.  
 Niagara Machine & Tool Works, Buffalo,  
 N. Y.  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.  
 Wickes Bros., Saginaw, Mich.  
 Williams, White & Co., Moline, Ill.  
**Shears, Plate Trimming—**  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
**Shears, Portable—**  
 Schuchardt & Schutte, 90 West St., N. Y.  
**Shears, Pruning—**  
 Clauss Shear Co., Fremont, O.  
 Columbia Grey Iron Co., Columbia, Pa.  
 Columbian Cutlery Co., Reading, Pa.  
 W. H. Compton Shear Co., Newark, N. J.  
 Cronk & Carrier Mfg. Co., Elmira,  
 N. Y.  
 John H. Graham & Co., 113 Chambers  
 St., New York.  
 R. Heinisch's Sons Co., Newark, N. J.  
 Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.  
 Rhodes Mfg. Co., Grand Rapids, Mich.  
 Seymour Smith & Son, Oakville, Ct.  
 Wiebusch & Hilger, Ltd., 106-110 Lafay-  
 ette St., New York.

(See also Pruners.)

**Shears, Roaching—**  
 (See Shears, Horse and Mule.)

**Shears, Rope—**  
 (See Shears, Leather, Rope and Rubber.)

**Shears, Rotary—**  
 Bethlehem Foundry & Machine Co.,  
 South Bethlehem, Pa.

Blake & Johnson Co., Waterbury, Ct.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Consolidated Press & Tool Co., Hastings,  
 Mich.  
 Ferracute Machine Co., Bridgeton, N. J.  
 A. Garrison Foundry Co., Pittsburgh, Pa.  
 Chas. Leflier & Co., Brooklyn, N. Y.  
 Manning, Maxwell & Moore, Inc., 85  
 Liberty St., New York.  
 Morgan Construction Co., Worcester,  
 Mass.  
 Niagara Machine & Tool Works, Buffalo,  
 N. Y.  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.  
 George A. Ohl & Co., Newark, N. J.  
 Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.  
 United Engineering & Foundry Co., Pitts-  
 burgh, Pa.  
 Waterbury Farrel Foundry & Machine  
 Co., Waterbury, Ct.  
 Watson-Stillman Co., 50 Church St.,  
 New York.  
 Wickes Bros., Saginaw, Mich.

**Shears, Rotary Circle Cut-  
 ting—**

E. W. Bliss Co., Brooklyn, N. Y.  
 Consolidated Press & Tool Co., Hastings,  
 Mich.  
 Ferracute Machine Co., Bridgeton, N. J.  
 R. S. Newbold & Son Co., Norristown,  
 Pa.  
 Niagara Machine & Tool Works, Buffalo,  
 N. Y.  
 George A. Ohl & Co., Newark, N. J.  
 Waterbury Farrel Foundry & Machine  
 Co., Waterbury, Ct.

**Shears, Sheep—**  
 Columbian Cutlery Co., Reading, Pa.  
 Wiebusch & Hilger, Ltd., 106-110 Lafay-  
 ette St., New York.

**Shears, Slitting—**  
 Armstrong-Blum Mfg. Co., 109 N. Fran-  
 cisco Ave., Chicago, Ill.  
 Badger State Machine Co., Janesville,  
 Wis.

Blake & Johnson Co., Waterbury, Ct.  
 E. W. Bliss Co., Brooklyn, N. Y.  
 Cincinnati Punch & Shear Co., Cincin-  
 nati, O.  
 Cleveland Punch & Shear Works Co.,  
 Cleveland, O.  
 Consolidated Press & Tool Co., Hastings,  
 Mich.  
 Ferracute Machine Co., Bridgeton, N. J.  
 Hilles & Jones Co., Wilmington, Del.  
 Manning, Maxwell & Moore, Inc., 85  
 Liberty St., New York.  
 C. S. Mersick & Co., New Haven, Ct.  
 Morgan Engineering Co., Alliance, O.  
 R. S. Newbold & Son Co., Norristown,  
 Pa.  
 New Doty Mfg. Co., Janesville, Wis.  
 Niagara Machine & Tool Co., Buffalo,  
 N. Y.  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.  
 George A. Ohl & Co., Newark, N. J.  
 Schatz Mfg. Co., Chappaqua, N. Y.  
 United Engineering & Foundry Co., Pitts-  
 burgh, Pa.  
 Waterbury Farrel Foundry & Machine  
 Co., Waterbury, Ct.

Wickes Bros., Saginaw, Mich.  
 Zeh & Hahnemann Co., Newark, N. J.  
**Shears, Slitting, Hand—**  
 Armstrong-Blum Mfg. Co., 109 N. Francisco Ave., Chicago, Ill.  
 Badger State Machine Co., Janesville, Wis.  
 Schatz Mfg. Co., Chappaqua, N. Y.  
**Shears, Straight, Metal—**  
 (See Shears and Snips, Tinner's.)  
**Shears, Tailors—**  
 Claus Shear Co., Fremont, O.  
 W. H. Compton Shear Co., Newark, N. J.  
 E. Heinisch's Sons Co., Newark, N. J.  
 Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.  
**Shears, Upholsterers' and Carpet—**  
 B. Heinisch's Sons Co., Newark, N. J.  
 J. Wiss & Sons Co., Newark, N. J.  
**Shears, Wire—**  
 Badger State Machine Co., Janesville, Wis.  
 J. M. King & Co., Waterford, N. Y.  
**Shears, Wire Nail Scrap—**  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
**Sheathing, Copper—**  
 Hendricks Bros., 49 Cliff St., New York.  
 Merchant & Evans Co., Philadelphia, Pa.  
**Sheathing, Non-Corrosive—**  
 Indestructible Metal Co., 50 Church St., New York.  
**Sheaves, Chain—**  
 Poole Engineering & Machine Co., Baltimore, Md.  
**Sheaves, Door—**  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 I. S. Spencer's Sons, Guilford, Ct.  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
**Sheaves, Hoisting—**  
 Boston & Lockport Block Co., East Boston, Mass.  
 Broderick & Bascom Rope Co., St. Louis.  
 W. E. Caldwell Co., Inc., Louisville, Ky.  
 W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.  
 A. Leschen & Sons Rope Co., St. Louis.  
 Pennsylvania Engineering Works, New Castle, Pa.  
**Sheaves, Power Transmission—**  
 American Well Works, Aurora, Ill.  
 Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
 Broderick & Bascom Rope Co., St. Louis.  
 Brown Hoisting Machinery Co., Cleveland.  
 H. W. Caldwell & Son, Western Ave. and 17th St., Chicago, Ill.  
 Thos. Carl's Sons Co., N. S. Pittsburgh, Pa.  
 W. E. Caldwell Co., Inc., Louisville, Ky.  
 Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.  
 Dodge Mfg. Co., Mishawaka, Ind.  
 Falls Rivet & Machine Co., Cuyahoga Falls, O.  
 Jeffrey Mfg. Co., Columbus, O.  
 Jones & Laughlin Steel Co., Pittsburgh.  
 W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.  
 A. Leschen & Sons Rope Co., St. Louis.  
 Mesta Machine Co., Pittsburgh, Pa.

Pennsylvania Engineering Works, New Castle, Pa.  
 Poole Engineering & Machine Co., Baltimore, Md.  
 Soule Steam Feed Works, Meridian, Miss.  
**Sheaves, Roller Bushed and Ball Bearing—**  
 Boston & Lockport Block Co., East Boston, Mass.  
 Thomas Laughlin Co., Portland, Me.  
 Wilcox, Crittenden & Co., Inc., Middletown, Ct.  
**Sheaves, Sash—**  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
**Sheaves, Shutter—**  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
**Sheaves, Tackle Block—**  
 American Well Works, Aurora, Ill.  
 Broderick & Bascom Rope Co., St. Louis.  
 Thomas Laughlin Co., Portland, Me.  
 A. Leschen & Sons Rope Co., St. Louis.  
 W. W. Patterson Co., Pittsburgh, Pa.  
 Piqua Handle & Mfg. Co., Piqua, O.  
 W. & J. Tiebout, 118 Chambers St., N. Y.  
 Union Hardware Co., Torrington, Ct.  
 Wilcox, Crittenden & Co., Inc., Middletown, Ct.  
**Sheaves, Wire Rope—**  
 Boston & Lockport Block Co., East Boston, Mass.  
**Sheaves, Wood Split—**  
 American Well Works, Aurora, Ill.  
 Dodge Mfg. Co., Mishawaka, Ind.  
 Saginaw Mfg. Co., Saginaw, Mich.  
**Sheep Bells, Shears—**  
 (See Bells, Shears.)  
**Sheep Shearing Machines—**  
 American Shearer Mfg. Co., Nashua, N. H.  
 Chicago Flexible Shaft Co., 124 La Salle Ave., Chicago, Ill.  
 Sigourney Tool Co., Hartford, Ct.  
**Sheet and Roll Brass—**  
 (See Brass, Roll and Sheet.)  
**Sheet and Roll Bronze—**  
 (See Bronze, Roll & Sheet.)  
**Sheet Bars—**  
 (See Bars, Sheet.)  
**Sheet Copper—**  
 (See Copper, Roll and Sheet.)  
**Sheet Corrugating Machinery—**  
 Niagara Machine & Tool Co., Buffalo, N. Y.  
 Geo. A. Ohl & Co., Newark, N. J.  
**Sheet Guides—**  
 (See Guides, Sheet and Rope.)  
**Sheet Iron, Cold Rolled—**  
 American Sheet and Tin Plate Co., Pittsburgh, Pa.  
 Parkersburg Iron & Steel Co., Parkersburg, W. Va.  
 Thomas Steel Co., Niles, O.  
 Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.  
 Youngstown Sheet & Tube Co., Youngstown, O.  
 MERCHANTS.  
 Bourne-Fuller Co., Cleveland, O.  
 Arthur C. Harvey Co., Boston, Mass.  
 Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.

**Merchant & Evans Co.**, Philadelphia, Pa.  
Geo. Nash Co., 115 Washington Boulevard,  
Chicago, Ill.

**Joseph T. Ryerson & Son**, 18-22 Milwaukee Ave., Chicago, Ill.  
**Scully Steel & Iron Co.**, Halsted and Wayman Sts., Chicago, Ill.  
**Charles G. Stevens Co.**, 60 So. Canal St., Chicago, Ill.

**Waite, Ranlet & Co.**, Boston, Mass.  
**Sheet Iron Door Caps—**  
(See Caps, Door and Window, Metal.)

**Sheet Iron Finials—**  
(See Finials and Vanes, Metal.)

**Sheet Iron, Hot Rolled—**  
Thomas Steel Co., Niles, O.

**Sheet Iron, Planished—**  
American Sheet and Tin Plate Co., Pittsburgh, Pa.

#### MERCHANTS.

**Bourne-Fuller Co.**, Cleveland, O.  
**Merchant & Evans Co.**, Philadelphia, Pa.  
**Joseph T. Ryerson & Son**, 18-22 Milwaukee Ave., Chicago, Ill.  
**Scully Steel & Iron Co.**, Halsted and Wayman Sts., Chicago, Ill.  
**Waite, Ranlet & Co.**, Boston, Mass.

**Sheet Lead—**  
E. Phillips & Sons, So. Hanover, Mass.

**Sheet Metal, Blanked and Formed—**  
(See Stamping, Sheet Metal.)

**Sheet Metal Dies, Gauges—**  
(See Dies, Gauges.)

**Sheet Metal Goods, to Order—**

**Bridgeport Hardware Mfg. Co.**, Bridgeport, Ct.  
**Chattanooga Roofing & Foundry Co.**, Chattanooga, Tenn.

**A. N. Clark & Son**, Plainville, Ct.  
**W. J. Clark Co.**, Salem, O.  
**Crosby Co.**, Buffalo, N. Y.

**Albert B. Curtis**, Worcester, Mass.  
**Eastern Machine & Stamping Co.**, Providence, R. I.

**Geuder, Paeschke & Frey Co.**, Milwaukee, Wis.

**Goodwin & Kintz Co.**, Winsted, Ct.  
**Janney, Steinmetz & Co.**, Philadelphia.  
**John R. Keim Mills, Inc.**, Buffalo, N. Y.  
**E. Konigslow Stamping & Tool Works**, Cleveland, O.

**Wm. B. Scaife & Sons Co.**, Pittsburgh, Pa.  
**Schatz Mfg. Co.**, Chappaqua, N. Y.

**M. I. Smith**, Bristol, Ct.  
**W. H. Stearns Stamping Co.**, Worcester, Mass.

**Worcester Pressed Steel Co.**, Worcester, Mass.

**Worcester Stamping Co.**, Worcester, Mass.

**Sheet Metal Perforated and Punched to Order—**

**Erdle Perforating Co.**, Rochester, N. Y.  
**Harrington & King Perforating Co.**, 209 N. Union St., Chicago, Ill.

**Hendrick Mfg. Co.**, Carbondale, Pa.  
**E. Konigslow Stamping & Tool Works**, Cleveland, O.

**Manhattan Perforated Metal Co.**, 237 Centre St., New York.

**Charles Mundt & Sons**, 411-447 Pearl St., New York.

**Sheet Metal Specialties—**  
(See Metal Specialties to Order.)

**Sheet Metal Stamping—**  
(See Stamping, Sheet Metal.)

**Sheet Metal Work—**  
**Avery Stamping Co.**, Cleveland, O.

**Blossert Electric Construction Co.**, Utica, N. Y.

**A. N. Clark & Son**, Plainville, Ct.  
**W. J. Clark Co.**, Salem, O.

**Clark Novelty Co.**, Rochester, N. Y.  
**Drouve Co.**, Bridgeport, Ct.

**Eastern Machine & Stamping Co.**, Providence, R. I.

**Gem Mfg. Co.**, Pittsburgh, Pa.  
**Geuder, Paeschke & Frey Co.**, Milwaukee, Wis.

**Globe Machine & Stamping Co.**, Cleveland, O.

**John R. Keim Mills, Inc.**, Buffalo, N. Y.  
**E. Konigslow Stamping & Tool Co.**, Cleveland, O.

**Otto Konigslow Mfg. Co.**, Cleveland, O.  
**Mathews Mfg. Co.**, Worcester, Mass.

**Wm. B. Scaife & Sons Co.**, Pittsburgh, Pa.

**Schatz Mfg. Co.**, Chappaqua, N. Y.  
**M. I. Smith**, Bristol, Ct.

**Turner Brass Works**, Sycamore, Ill.  
**W. & S. Mfg. Co.**, Worcester, Mass.

**Webster Mfg. Co.**, 1075-1111 W. 15th St., Chicago, Ill.

**Robert Wetherill & Co.**, Chester, Pa.  
**Whitlock Coil Pipe Co.**, Hartford, Ct.

**Worcester Pressed Steel Co.**, Worcester, Mass.

**Sheet Rubber, Unvulcanized—**

**New York Belting & Packing Co.**, 91-93 Chambers St., New York.

**Sheet Steel, Cold Rolled—**  
**Allegheny Steel Co.**, Pittsburgh, Pa.

**American Sheet and Tin Plate Co.**, Pittsburgh, Pa.

**American Tube & Stamping Co.**, Bridgeport, Ct.

**Columbia Steel Co.**, Elyria, O.  
**Henry Diaston & Sons**, Philadelphia, Pa.

**Empire Iron & Steel Co.**, Niles, O.  
**Hazelton Sheet Steel Co.**, Hazelton, Pa.

**Wm. Jessop & Sons**, 91 John St., N. Y.  
**Morris & Bailey Steel Co.**, Pittsburgh, Pa.

**Newport Rolling Mill Co.**, Newport, Ky.  
**Parkesburg Iron & Steel Co.**, Parkesburg, W. Va.

**Stanley Works**, New Britain, Ct.  
**Superior Steel Co.**, Carnegie, Pa.

**Thomas Steel Co.**, Niles, O.  
**S. & C. Wardlow**, 278 Pearl St., N. Y.

**Alan Wood Iron & Steel Co.**, 519 Arch St., Philadelphia, Pa.

**Worcester Pressed Steel Co.**, Worcester, Mass.

**Youngstown Iron & Steel Roofing Co.**, Youngstown, O.

**Youngstown Sheet & Tube Co.**, Youngstown, O.

#### MERCHANTS.

**Bourne-Fuller Co.**, Cleveland, O.  
**Denman & Davis**, 85-91 Lafayette St., New York.

**Dilworth, Gilbert & Towne, Inc.**, 35-37 Wooster St., New York.

**Arthur C. Harvey Co.**, Boston, Mass.  
**Harold McCalla**, 414 Fairmount Ave., Philadelphia, Pa.

**Merchant & Evans Co.**, Philadelphia, Pa.

Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.  
 Patriarche & Bell, 215 Pearl St., N. Y.  
 Pierson & Co., 29 Broadway, New York.  
 Horace T. Potts & Co., 316-320 N. Third St., Philadelphia, Pa.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.  
 Charles G. Stevens Co., 60 So. Canal St., Chicago, Ill.  
 Waite, Ranlet & Co., Boston, Mass.  
 Woodward, Wight & Co., Ltd., New Orleans, La.

**Sheet Steel. Covered with Nickel—**

Hermann Boker & Co., 101-103 Duane St., New York.  
 Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

**Sheet Steel. Hot Rolled—**

Allegheny Steel Co., Pittsburgh, Pa.  
 American Sheet and Tin Plate Co., Pittsburgh, Pa.  
 Henry Disston & Sons, Philadelphia, Pa.  
 Empire Iron & Steel Co., Niles, O.  
 Hobson, Houghton & Co., Ltd., 21 Cliff St., New York.  
 Wm. Jessop & Sons, 91 John St., N. Y.  
 La Belle Iron Works, Steubenville, O.  
 Newport Rolling Mill Co., Newport, Ky.  
 Parkesburg Iron & Steel Co., Parkesburg, W. Va.  
 Superior Steel Co., Carnegie, Pa.  
 Thomas Steel Co., Niles, O.  
 S. & C. Wardlow, 278 Pearl St., N. Y.  
 J. Wilkes Co., 135 William St., N. Y.  
 Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.  
 Worcester Pressed Steel Co., Worcester, Mass.  
 Youngtown Iron & Steel Roofing Co., Youngtown, O.  
 Youngtown Sheet & Tube Co., Youngtown, O.

**MERCHANTS.**

Hermann Boker & Co., 101-103 Duane St., New York.  
 Bourne-Fuller Co., Cleveland, O.  
 Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.  
 Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.  
 Merchant & Evans Co., Philadelphia, Pa.  
 Patriarche & Bell, 215 Pearl St., N. Y.  
 F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
 Horace T. Potts & Co., 316-320 N. Third St., Philadelphia, Pa.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.  
 Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.  
 Charles G. Stevens Co., 60 So. Canal St., Chicago, Ill.

**Sheets, Aluminum—**

Aluminum Co. of America, Pittsburgh, Pa.  
 Scovill Mfg. Co., Waterbury, Ct.

**Sheets, Aluminum. Perforated—**

Erdle Perforating Co., Rochester, N. Y.

**Sheets, Bicycle Tube—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

**Sheets, Brass—**

(See Brass, Roll and Sheet.)

**Sheets, Composition Metal—**

Indestructible Metal Co., 50 Church St., New York.

**Sheets, Corrugated Iron—**

American Sheet & Tin Plate Co., Pittsburgh, Pa.

W. N. Kratzer & Co., Pittsburgh, Pa.

Thomas Steel Co., Niles, O.

**Sheets, Corrugated Steel—**

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Hazleton Sheet Steel Co., Hazleton, Pa.

W. N. Kratzer & Co., Pittsburgh, Pa.

Thomas Steel Co., Niles, O.

**MERCHANTS.**

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

**Sheets, Crucible Steel—**

Henry Disston & Sons, Philadelphia, Pa.

**Sheets, Curved Corrugated—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

Empire Iron & Steel Co., Niles, O.

Hazleton Sheet Steel Co., Hazleton, Pa.

La Belle Iron Works, Steubenville, O.

Newport Rolling Mill Co., Newport, Ky.

Wm. B. Scaife & Sons Co., Pittsburgh.

Thomas Steel Co., Niles, O.

Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.

Youngtown Sheet & Tube Co., Youngtown, O.

**Sheets, Double Refined Puddled Iron—**

Empire Iron & Steel Co., Niles, O.  
 Thomas Steel Co., Niles, O.

Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.

Youngtown Iron & Steel Roofing Co., Youngtown, O.

Youngtown Sheet & Tube Co., Youngtown, O.

**Sheets, Electrical**

Allegheny Steel Co., Pittsburgh, Pa.  
 American Sheet and Tin Plate Co., Pittsburgh, Pa.

Empire Iron & Steel Co., Niles, O.

Inland Steel Co., First National Bank Bldg., Chicago, Ill.

Newport Rolling Mill Co., Newport, Ky.

Parkesburg Iron & Steel Co., Parkesburg, W. Va.

Thomas Steel Co., Niles, O.

Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.

J. Wood & Bros. Co., Conshohocken, Pa.

**MERCHANTS.**

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

**Sheets, Enameling Steel—**

Allegheny Steel Co., Pittsburgh, Pa.  
 American Sheet and Tin Plate Co., Pittsburgh, Pa.

La Belle Iron Works, Steubenville, O.

Parkesburg Iron & Steel Co., Parkesburg, W. Va.

Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.

**Sheets, Galley—**

Bridgeport Brass Co., 253 B'way, N. Y.

**Sheets, Galvanized—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

Chattanooga Roofing &amp; Foundry Co., Chattanooga, Tenn.

Delphos Mfg. Co., Delphos, O.

Empire Iron &amp; Steel Co., Niles, O.

Hazelton Sheet Steel Co., Hazelton, Pa.

Inland Steel Co., First National Bank Bldg., Chicago, Ill.

La Belle Iron Works, Steubenville, O.

McCullough Iron Co., Wilmington, Del.

Newport Rolling Mill Co., Newport, Ky.

Seneca Iron &amp; Steel Co., Buffalo, N. Y.

Thomas Steel Co., Niles, O.

Alan Wood Iron &amp; Steel Co., 519 Arch St., Philadelphia, Pa.

Youngstown Iron &amp; Steel Roofing Co., Youngstown, O.

Youngstown Sheet &amp; Tube Co., Youngstown, O.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.

Denman &amp; Davis, 85-91 Lafayette St., New York.

Dilworth, Gilbert &amp; Towne, Inc., 35-37 Wooster St., New York.

Arthur C. Harvey Co., Boston, Mass.

C. B. Houston &amp; Co., Girard Bldg., Philadelphia, Pa.

Merchant &amp; Evans Co., Philadelphia, Pa.

Edmund W. Mudge &amp; Co., Pittsburgh, Pa.

Pierson &amp; Co., 29 Broadway, New York.

Horace T. Potts &amp; Co., 316-320 N. Third St., Philadelphia, Pa.

Joseph T. Ryerson &amp; Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel &amp; Iron Co., Halsted and Wayman Sts., Chicago, Ill.

Waite, Ranlet &amp; Co., Boston, Mass.

**Sheets, German Silver—**

Riverside Metal Co., Riverside, N. J.

Seymour Mfg. Co., Seymour, Ct.

**Sheets, Iron and Steel—**

Allegheny Steel Co., Pittsburgh, Pa.

American Sheet and Tin Plate Co., Pittsburgh, Pa.

American Steel &amp; Wire Co., Commercial National Bank Bldg., Chicago, Ill.

American Tube &amp; Stamping Co., Bridgeport, Ct.

Chattanooga Roofing &amp; Foundry Co., Chattanooga, Tenn.

Henry Diston &amp; Sons, Philadelphia, Pa.

Empire Iron &amp; Steel Co., Niles, O.

Follansbee Bros. Co., Pittsburgh, Pa.

Inland Steel Co., First National Bank Bldg., Chicago, Ill.

Janney, Steinmetz &amp; Co., Philadelphia.

William Jessop &amp; Son, 91 John St., N. Y.

McCullough Iron Co., Wilmington, Del.

Parkesburg Iron &amp; Steel Co., Parkesburg, W. Va.

Thomas Prosser &amp; Son, 26 Platt St., N. Y.

Seneca Iron &amp; Steel Co., Buffalo, N. Y.

Thomas Steel Co., Niles, O.

Alan Wood Iron &amp; Steel Co., 915 Arch St., Philadelphia, Pa.

J. Wood &amp; Bros. Co., Conshohocken, Pa.

Youngstown Iron &amp; Steel Roofing Co., Youngstown, O.

Youngstown Sheet &amp; Tube Co., Youngstown, O.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.

Denman &amp; Davis, 85-91 Lafayette St., N. Y.

Dilworth, Gilbert &amp; Towne, Inc., 35-37 Wooster St., New York.

Arthur C. Harvey Co., Boston, Mass.

C. B. Houston &amp; Co., Girard Bldg., Philadelphia, Pa.

Ernest Law &amp; Co., 15th and Market Sts., Philadelphia, Pa.

Henry Levis &amp; Co., 26 So. 15th St., Philadelphia, Pa.

Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.

W. G. McKenney &amp; Co., Pittsburgh, Pa.

Merchant &amp; Evans Co., Philadelphia, Pa.

Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.

Pierson &amp; Co., 29 Broadway, New York.

Horace T. Potts &amp; Co., 316-320 No. 3d St., Philadelphia, Pa.

Thos. Prosser &amp; Son, 26 Platt St., N. Y.

Joseph T. Ryerson &amp; Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel &amp; Iron Co., 69 N. Halsted St., Chicago, Ill.

Charles G. Stevens Co., 58-60 So. Canal St., Chicago, Ill.

Wheelock, Lovejoy &amp; Co., 23 Cliff St., New York.

**Sheets, Locomotive Jacket Steel—**

Hazelton Sheet Steel Co., Hazelton, Pa.

Alan Wood Iron &amp; Steel Co., 519 Arch St., Philadelphia, Pa.

J. Wood &amp; Bros. Co., Conshohocken, Pa.

**Sheets, Metal, Eave Trough and Conductor Stock—**

Hazelton Sheet Steel Co., Hazelton, Pa.

Thomas Steel Co., Niles, O.

**Sheets, Milk Can Body—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

Parkesburg Iron &amp; Steel Co., Parkesburg, W. Va.

**Sheets, Nickel—**

Hermann Boker &amp; Co., 101-103 Duane St., New York.

**Sheets, Open Hearth Steel—**

Allegheny Steel Co., Pittsburgh, Pa.

American Sheet &amp; Tin Plate Co., Pittsburgh, Pa.

Empire Iron &amp; Steel Co., Niles, O.

La Belle Iron Works, Steubenville, O.

Newport Rolling Mill Co., Newport, Ky.

Parkesburg Iron &amp; Steel Co., Parkesburg, W. Va.

Thomas Prosser &amp; Son, 26 Platt St., N. Y.

Tennessee Coal, Iron &amp; Railroad Co., 71 Broadway, New York.

Thomas Steel Co., Niles, O.

Alan Wood Iron &amp; Steel Co., 519 Arch St., Philadelphia, Pa.

Youngstown Sheet &amp; Tube Co., Youngstown, O.

**MERCHANTS.**

Dilworth, Gilbert &amp; Towne, Inc., 35-37 Wooster St., New York.

**Sheets, Phosphor Bronze—**

Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

Paul S. Reeve &amp; Son, Philadelphia, Pa.

Riverside Metal Co., Riverside, N. J.

**Sheets, Platinum—**

Baker & Co., Inc., Newark, N. J.  
J. Bishop & Co., Malvern, Pa.

**Sheets, Polished Steel—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.  
Follansbee Bros. Co., Pittsburgh, Pa.  
Parkesburg Iron & Steel Co., Parkesburg, W. Va.

**Sheets, Roofing—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.  
Empire Iron & Steel Co., Niles, O.  
Hazelton Sheet Steel Co., Hazelton, Pa.  
Inland Steel Co., First National Bank Bldg., Chicago, Ill.  
La Belle Iron Works, Steubenville, O.  
McCullough Iron Co., Wilmington, Del.  
Newport Rolling Mill Co., Newport, Ky.  
Parkesburg Iron & Steel Co., Parkesburg, W. Va.  
Wm. B. Scaife & Sons Co., Pittsburgh.  
Thomas Steel Co., Niles, O.  
Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.  
Youngstown Sheet & Tube Co., Youngstown, O.

**MERCHANTS.**

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

**Sheets, Steel Blue, Annealed—**

American Sheet & Tin Plate Co., Pittsburgh, Pa.

La Belle Iron Works, Steubenville, O.

**Sheets, Steel, for Deep**

**Stamping—**

Allegheny Steel Co., Pittsburgh, Pa.  
American Sheet & Tin Plate Co., Pittsburgh, Pa.

Empire Iron & Steel Co., Niles, O.  
La Belle Iron Works, Steubenville, O.

Newport Rolling Mill Co., Newport, Ky.  
Parkesburg Iron & Steel Co., Parkesburg, W. Va.

Thomas Steel Co., Niles, O.  
Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.

**MERCHANTS.**

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

**Sheets, Steel, for Electro-**

**Plating—**

Allegheny Steel Co., Pittsburgh, Pa.  
Follansbee Bros. Co., Pittsburgh, Pa.

**Sheets, Steel Range—**

Allegheny Steel Co., Pittsburgh, Pa.  
American Sheet and Tin Plate Co., Pittsburgh, Pa.

Empire Iron & Steel Co., Niles, O.  
Follansbee Bros. Co., Pittsburgh, Pa.

Newport Rolling Mill Co., Newport, Ky.  
Parkesburg Iron & Steel Co., Parkesburg, W. Va.

Thomas Steel Co., Niles, O.  
Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.

Youngstown Sheet & Tube Co., Youngstown, O.

**Sheets, Steel Shovel—**

Allegheny Steel Co., Pittsburgh, Pa.

**Sheets, Steel Stamping—**

Allegheny Steel Co., Pittsburgh, Pa.  
Empire Iron & Steel Co., Niles, O.

Follansbee Bros. Co., Pittsburgh, Pa.  
La Belle Iron Works, Steubenville, O.

Parkesburg Iron & Steel Co., Parkesburg, W. Va.

Thomas Steel Co., Niles, O.

Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.

**Sheets, Stove Body—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

Empire Iron & Steel Co., Niles, O.  
Follansbee Bros. Co., Pittsburgh, Pa.

Parkesburg Iron & Steel Co., Parkesburg, W. Va.  
Thomas Steel Co., Niles, O.

Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.

**Sheets, Tinned Dairy—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

**Shelf Boxes, Brackets, Pins—**

(See Boxes, Brackets, Pins.)

**Shells, Corn—**

Heath Foundry & Mfg. Co., Plymouth, O.  
Keystone Farm Machine Co., York, Pa.

R. W. Whitehurst Co., Norfolk, Va.

**Shells—**

(See Cups and Shells, Drawn Steel; also Metal Specialties, to order.)

**Shells, Automobile and Marine Boiler—**

Avery Stamping Co., Cleveland, O.  
Wm. B. Scaife & Sons Co., Pittsburgh.

**Shells, Boiler, Welded—**

American Welding Co., Carbondale, Pa.

**Shells, Brass, Shot—**

Union Metallic Cartridge Co., Bridgeport, Ct.

**Shells, Electric Socket, Fixture, Fuse, &c.—**

Scovill Mfg. Co., Waterbury, Ct.

**Shells, Gong—**

(See Gongs.)

**Shells, Paper, Loaded—**

Union Metallic Cartridge Co., Bridgeport, Ct.

**Shells, Paper Shot, Empty—**

Union Metallic Cartridge Co., Bridgeport, Ct.

**Shells, Push Button—**

(See Electric Woods.)

**Shells, Rifled Bullet—**

J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

**Shells, Rock Crusher—**

Chrome Steel Works, Chrome, N. J.  
Thomas Prosser & Son, 26 Platt St., N.Y.

Taylor Iron & Steel Co., High Bridge, N. J.

**Shells, Roll—**

Blake & Johnson Co., Waterbury, Ct.  
Chrome Steel Works, Chrome, N. J.

R. C. Jenkinson & Co., Newark, N. J.  
Thomas Prosser & Son, 26 Platt St., N.Y.

Taylor Iron & Steel Co., High Bridge, N. J.

**Shells, Seamless Drawn Steel, for Ordnance—**

Avery Stamping Co., Cleveland, O.  
Bethlehem Steel Co., So. Bethlehem, Pa.

Janney, Steinmetz & Co., Philadelphia.

Pressed Steel Tank Co., Milwaukee, Wis.

**Shells, Separator, Seamless Welded—**

American Welding Co., Carbondale, Pa.

**Shelves and Shelving. Library, Factory, &c.**—  
New Britain Machine Co., New Britain,  
Ct.

**Terrell's Equipment Co.**, Grand Rapids,  
Mich.

**Shelves, Refrigerator**—  
Buffalo Wire Works Co., Inc., Buffalo,  
N. Y.

Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.  
Wright Wire Co., Worcester, Mass.

**Shelves, Stove Pipe**—  
Arcade Mfg. Co., Freeport, Ill.

**Shelves, Stove Pipe, Wire**—  
(See Household Articles, Wire.)

**Shelves, Window**—  
Andrews Wire & Iron Works, Rockford,  
Ill.

**Shelving, Hardware Store**—  
W. C. Heller & Co., Montpelier, O.  
J. D. Warren Mfg. Co., Chicago, Ill.

**Shelving, Steel**—  
W. J. Clark Co., Salem, O.

**Shepherds' Crooks**—  
(See Crooks, Shepherds'.)

**Sherardizing**—  
(See Galvanizing Plants, Sherardizing.)

**Shields, Expansion Bolt**—  
Brohard Co., 1824 No. 9th St., Philadel-  
phia, Pa.

Isaac Church, South Norwalk, Ct.  
Diamond Expansion Bolt Co., 90 West  
St., New York.

F. H. Evans, Brooklyn, N. Y.  
Wm. H. Haskell Mfg. Co., Pawtucket,  
R. I.

Star Expansion Bolt Co., 147-149 Cedar  
St., New York.

Stewart & Romaine Mfg. Co., Philadel-  
phia, Pa.

**Shifters, Belt**—  
(See Belt Shifters.)

**Shims**—  
(See Wedges and Shims.)

**Shingle and Heading Ma-  
chines**—  
(See Heading and Shingle Machines.)

**Shingles, Metallic**—  
Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.

Merchant & Evans Co., Philadelphia, Pa.

**Shingling Hatchets**—  
(See Hatchets, Shingling, Half, &c.)

**Ship Anchors, Pumps**—  
(See Anchors, Pumps.)

**Ship Carpenters' Tools**—  
(See Tools, Ship Carpenters'.)

**Ship Chandlery Hardware**—  
Thomas Laughlin Co., Portland, Me.  
W. & J. Liebout, 118 Chambers St.,  
New York.

Wilcox, Crittenden & Co., Inc., Middle-  
town, Ct.

**Ship Hardware**—  
(See Marine Hardware.)

**Ship Locks and Latches**—  
(See Locks and Latches.)

**Shipbuilders**—  
American Bridge Co. of New York, 30  
Church St., New York.

Newport News Shipbuilding & Dry Dock  
Co., Newport News, Va.

**Shipyard Machinery**—  
Badger State Machine Co., Janesville,  
Wis.

Bertsch & Co., Cambridge City, Ind.

Brown Hoisting Machinery Co., Clevel-  
and, O.

Browning Engineering Co., Cleveland, O.

Detrick & Harvey Machine Co., Balti-  
more.

Espen-Lucas Machine Works, Broad and  
Noble Sts., Philadelphia, Pa.

Fawcus Machine Co., Pittsburgh, Pa.

Hilles & Jones Co., Wilmington, Del.

Interstate Engineering Co., Bedford, C.

Niles-Bement-Pond Co., 111 Broadway,  
New York.

Geo. A. Ohi & Co., Newark, N. J.

Stow Flexible Shaft Co., 26th & Callow-  
hill Sts., Philadelphia, Pa.

Wickes Bros., Saginaw, Mich.

Wellman-Seaver-Morgan Co., Cleveland, O.

**MERCHANTS.**

Hill, Clarke & Co., Boston, Mass.

Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted  
St., Chicago, Ill.

Vandyck, Churchill Co., 8 Dey St., N. Y.

**Shoddy Washers**—  
(See Washers, Shoddy.)

**Shoe Hook and Eyelet Set-  
ting Machines**—  
F. H. Smith Mfg. Co., 18-30 W. Randolph  
St., Chicago, Ill.

**Shoe Horns**—  
(See Horns, Shoe.)

**Shoe Nail Machines**—  
(See Nail Machines, Shoe.)

**Shoe Peg Machinery**—  
Humphrey Machine Co., Keene, N. H.

**Shoes, Brake**—  
American Steel Foundries, 42 Broadway,  
New York.

Barbour-Stockwell Co., Cambridgeport,  
Mass.

Bethlehem Foundry & Machine Co.,  
South Bethlehem, Pa.

Sessions Foundry Co., Bristol, Ct.

Transue & Williams Co., Alliance, O.

**Shoes, Horse and Mule**—  
American Horse Shoe Co., Phillipsburg,  
N. J.

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Burden Iron Co., Troy, N. Y.

Phoenix Horse Shoe Co., Poughkeepsie,  
N. Y.

Rhode Island Perkins Horse Shoe Co.,  
Providence, R. I.

Richmond Forgings Corporation, Rich-  
mond, Va.

Standard Horse Shoe Co., South Ware-  
ham, Mass.

United States Horse Shoe Co., Erie, Pa.

**Shoes, Ox**—  
Millers Falls Co., 28 Warren St., N. Y.

Scranton Forging Co., Scranton, Pa.

Walter W. Woodruff & Sons Co., Mount  
Carmel, Ct.

**Shoes, Pile**—  
Janney, Steinmetz & Co., Philadelphia.

W. W. Patterson Co., Pittsburgh, Pa.

**Shoes, Sleigh**—  
S. Cheney & Son, Manlius, N. Y.

**Shoes, Trunk—**  
J. H. Sessions & Son, Bristol, Ct.

**Shoes, Wagon Lock—**  
S. Cheney & Son, Manlius, N. Y.

**Shop Pans—**  
(See Pans, Shop.)

**Shot, Copper, Purified—**  
Riverside Metal Co., Riverside, N. J.

**Shot Guns—**  
(See Guns, Shot.)

**Shoulder Hooks—**  
(See Hooks, Cup and Shoulder.)

**Shovel and Spade D-Handle Tops—**  
(See Tops, Malleable D-Handle.)

**Shovel Brackets, Scrapers—**  
(See Brackets, Scrapers.)

**Shovel Machinery—**  
E. W. Bliss Co., Brooklyn, N. Y.  
Niagara Machine & Tool Works, Buffalo, N. Y.

**Shovels and Scoops, Furnace—**  
Avery Stamping Co., Cleveland, O.  
W. J. Clark Co., Salem, O.  
John H. Graham & Co., 113 Chambers St., New York.  
F. E. Kohler & Co., Canton, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Osborn Mfg. Co., Cleveland, O.  
Steel Basket Co., Cedar Rapids, Ia.

**Shovels and Spades—**  
Avery Stamping Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers St., New York.  
Hubbard & Co., Pittsburgh, Pa.  
F. E. Kohler & Co., Canton, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Shovels and Spades, Boys'—**  
Avery Stamping Co., Cleveland, O.

**Shovels and Spades, Tiling or Ditching—**  
American Fork & Hoe Co., Cleveland, O.  
Avery Stamping Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers St., New York.  
Hubbard & Co., Pittsburgh, Pa.  
Iwan Bros., South Bend, Ind.  
Ney Mfg. Co., Canton, O.  
Osmundson Spade Mfg. Co., Perry, Ia.

**Shovels, Brass and Bronze—**  
Avery Stamping Co., Cleveland, O.

**Shovels, Brick and Clay—**  
Avery Stamping Co., Cleveland, O.  
Hubbard & Co., Pittsburgh, Pa.

**Shovels, Canal—**  
(See Shovels and Spades.)

**Shovels, Coke—**  
(See Shovels and Spades.)

**Shovels, Collier—**  
Avery Stamping Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers St., New York.  
Hubbard & Co., Pittsburgh, Pa.

**Shovels, Excavating—**  
Avery Stamping Co., Cleveland, O.  
Hubbard & Co., Pittsburgh, Pa.  
Syracuse Chilled Plug Co., Syracuse, N. Y.

**Shovels, Irrigation—**  
Avery Stamping Co., Cleveland, O.  
Hubbard & Co., Pittsburgh, Pa.

**Shovels, Lime—**  
Hubbard & Co., Pittsburgh, Pa.

**Shovels, Mining—**  
Avery Stamping Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers St., New York.  
Hubbard & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Shovels, Molders'—**  
Avery Stamping Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers St., New York.  
Hubbard & Co., Pittsburgh, Pa.  
Hunsard & Co., Pittsburgh, Pa.  
S. Obermayer Co., Cincinnati, O.  
Osborn Mfg. Co., Cleveland, O.  
Steel Basket Co., Cedar Rapids, Ia.

**Shovels, Ore—**  
Avery Stamping Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers St., New York.  
Hubbard & Co., Pittsburgh, Pa.

**Shovels, Ox—**  
Kilbourne & Jacobs Mfg. Co., Columbus, O.

**Shovels, Power Grain—**  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

**Shovels, Railroad Tamping—**  
Avery Stamping Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers St., New York.  
Hubbard & Co., Pittsburgh, Pa.

**Shovels, Sewer—**  
Avery Stamping Co., Cleveland, O.

**Shovels, Snow—**  
Avery Stamping Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers St., New York.  
Hubbard & Co., Pittsburgh, Pa.

**Shovels, Spades and Spoons, Pole Hole—**  
Avery Stamping Co., Cleveland, O.  
John H. Graham & Co., 113 Chambers St., New York.  
Hubbard & Co., Pittsburgh, Pa.

**Shovels, Special, to Order—**  
Avery Stamping Co., Cleveland, O.

**Shovels, Steam—**  
Thomas Carlin's Sons Co., N. S. Pittsburgh, Pa.  
C. W. Hunt Co., West New Brighton, N. Y.

**MERCHANTS.**  
Thomas P. Conard & Co., 119 S. 4th St., Philadelphia, Pa.  
Dallett & Co., Harrison Bldg., Philadelphia, Pa.  
Edgar M. Moore & Co., Pittsburgh, Pa.

**Shovels, Steam, Teeth and Lins for—**  
Taylor Iron & Steel Co., High Bridge, N. J.

**Shovels, Stove—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.  
New York Stamping Co., Brooklyn, N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Shovels, Tiling—**  
(See Shovels and Spades, Tiling or Ditching.)



**Shovels, Tongs, Pokers, Fire Sets, &c.—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 Wrightsville Hardware Co., Wrightsville, Pa.

**Shovels, Tunnel—**  
Avery Stamping Co., Cleveland, O.**Shovels, Wooden—**  
John Sommer Faucet Co., Newark, N. J.**Showcase Catches—**  
(See Catches, Showcase.)**Shredders, Dry Fodder—**  
Keystone Farm Machine Co., York, Pa.  
Silver Mfg. Co., Salem, O.**Shredders, Ice—**  
(See Ice Harvesting Tools.)**Shredders, Vegetable—**  
Henry Diston & Sons, Philadelphia, Pa.  
National Saw Co., Newark, N. J.**Shrinkers, Tire—**  
Champion Blower & Forge Co., Lancaster, Pa.**Shuts, Cold—**  
Wiley & Russell Mfg. Co., Greenfield, Mass.**Shuts, Cold—**  
New Castle Forge & Bolt Co., New Castle, Pa.**Standard Chain Co., Pittsburgh, Pa.****Shutter Bars, Bolts, &c.—**  
(See Bars, Bolts, &c.)**Shutter Bowers, Shutter.**  
(See Bowers, Shutter.)**Shutter Workers—**  
(See Workers, Shutter.)**Shutters, Iron and Steel—**  
(See Doors and Shutters, Iron and Steel.)**Sickles—**  
(See Hooks, Grass.)**Sickles, Mower and Harvester—**  
Whitman & Barnes Mfg. Co., Chicago, Ill.**Side Pulleys—**  
(See Pulleys, Side.)**Sidewalk Cleaners, Hoists—**  
(See Cleaners, Hoists.)**Sidewalk Foundations—**  
Youngstown Iron & Steel Roofing Co., Youngstown, O.**Siding, Imitation Brick and Rock—**

(See Ceiling and Siding, Iron and Steel.)

**Siding, Iron and Steel—**  
(See Ceiling and Siding, Iron and Steel.)**Sieves—**  
(See Riddles and Sieves.)**Sieves, Ash—**  
Ludlow-Saylor Wire Co., St. Louis, Mo.**Sieves, Flour—**  
Wickwire Bros., Cortland, N. Y.**Sieves, Flour—**  
Estey Wire Works Co., 59 Fulton St., N. Y.**Sieves, Flour—**  
Fred J. Meyers Mfg. Co., Hamilton, O.**Sieves, Laboratory Testing—**  
Wickwire Bros., Cortland, N. Y.**Sieves, Laboratory Testing—**  
Howard & Morse, 45 Fulton St., N. Y.**Sieves, Laboratory Testing—**  
W. S. Tyler, Cleveland, O.**Sifters, Ash—**  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.**Sifters, Ash—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.**Dufur & Co., Baltimore, Md.****Gem Mfg. Co., Boston, Mass.****H. E. Hessler Co., Syracuse, N. Y.****Hill Dryer Co., Worcester, Mass.****Sifters, Flour—****Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.****Fred J. Meyers Mfg. Co., Hamilton, O.****Parker Wire Goods Co., Worcester, Mass.****Wire Goods Co., Worcester, Mass.****Sifters, Sand—****Barbour-Stockwell Co., Cambridgeport, Mass.****Ryram & Co., Inc., Detroit, Mich.****Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.****Gould & Eberhardt, Newark, N. J.****Hanna Engineering Works, 840 Elston Ave., Chicago, Ill.****Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.****Hendrick Mfg. Co., Carbondale, Pa.****Ludlow-Saylor Wire Co., St. Louis, Mo.****Manhattan Perforated Metal Co., 237 Centre St., New York.****Northern Engineering Works, Detroit, Mich.****S. Obermayer Co., Cincinnati, O.****J. W. Paxson Co., Philadelphia, Pa.****Whiting Foundry Equipment Co., Harvey, Ill.****Sifters, Tack—****Henry Perkins Co., Bridgewater, Mass.****Sifting Machines, Hand & Power—****Estey Wire Works Co., 59 Fulton St., N. Y.****Sights, Gun, Rifle, &c.—****Bethlehem Steel Co., So. Bethlehem, Pa.****J. Stevens Arms & Tool Co., Chicopee Falls, Mass.****Sign or Engravers' Brass—**  
(See Brass, Sign or Engravers.)**Signal Bells, Cord—**  
(See Bells, Cord.)**Signaling Apparatus, Electric—****General Electric Co., Schenectady, N. Y.****Signs and Trays, Lithographed Metal Advertising—****New York Metal Ceiling Co., 537-539 W. 24th St., New York.****Signs, Brass—****Schwerdtle Stamp Co., Bridgeport, Ct.****W. S. Tyler Co., Cleveland, O.****Signs, Enameled Iron—****Ingram-Richardson Mfg. Co., Beaver Falls, Pa.****Signs, Raised Letter—****Cleveland Galvanizing Works Co., Cleveland, O.****Signs, Sheet Metal—****Glen Mfg. Co., Ellwood City, Pa.****Schwerdtle Stamp Co., Bridgeport, Ct.****Signs, Wire, &c.—****Buffalo Wire Works Co., Buffalo, N. Y.****Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.****Glen Mfg. Co., Ellwood City, Pa.****Ludlow-Saylor Wire Co., St. Louis, Mo.****Fred J. Meyers Mfg. Co., Hamilton, O.****W. S. Tyler Co., Cleveland, O.****Wright Wire Co., Worcester, Mass.**

**Silico-Spiegel—**

MERCHANTS.

Frank Samuel, Harrison Bldg., Philadel-  
phia, Pa.

**Silicon, Carbide of—**  
Carborundum Co., Niagara Falls, N. Y.

**Silicon, Copper—**  
Roessler & Hasslacher Chemical Co., 100  
William St., New York.

**Sills and Lintels, Building—**  
(See Structural Material.)

**Silver—**

Baker & Co., Inc., Newark, N. J.

**Silver, German—**  
(See German Silver.)

**Silver Plated Brushes—**  
(See Brushes, Silver Plated.)

**Silver Plated Tableware—**  
(See Spoons and Forks, Silver and Plated.)

**Silver Solder, Tubing—**  
(See Solder, Tubing.)

**Single and Double Trees.**

**Plow and Wagon—**  
Youngstown Iron & Steel Roofing Co.,  
Youngstown, O.

**Singletrees, Hay Hoisting—**  
F. E. Myers & Bro., Ashland, O.

**Sink Bolts, Cleaners, Strain-  
ers—**  
(See Bolts, Cleaners, Strainers.)

**Sinks, Cast—**

Barnes Mfg. Co., Mansfield, O.  
Bethlehem Foundry & Machine Co., So.  
Bethlehem, Pa.

Goulds Mfg. Co., Seneca Falls, N. Y.  
Humphreys Mfg. Co., Mansfield, O.  
Jacob J. Vollrath Mfg. Co., Sheboygan,  
Wis.

**Sinks, Enameled—**

Barnes Mfg. Co., Mansfield, O.  
Jacob J. Vollrath Mfg. Co., Sheboygan,  
Wis.

**Sinks, Slop—**

Barnes Mfg. Co., Mansfield, O.  
S. Cheney & Son, Manlius, N. Y.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Jacob J. Vollrath Mfg. Co., Sheboygan,  
Wis.

**Sinks, Wrought Steel—**

Kilbourne & Jacobs Mfg. Co., Colum-  
bus, O.  
Lalanc & Grosjean Mfg. Co., 299 Broad-  
way, New York.

**Siphons—**

American Steam Gauge & Valve Mfg.  
Co., Boston, Mass.  
Crosby Steam Gauge & Valve Co., Boston.  
Eynon-Evans Mfg. Co., 1507 Clearfield  
St., Philadelphia, Pa.

Lunkenheimer Co., Cincinnati, O.  
Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

National Tube Co., Pittsburgh, Pa.

**Skate Rolls—**

(See Wheels, Roller Skate.)

**Skates, Ankle Support—**  
Barney & Berry, Springfield, Mass.  
Samuel Winslow Skate Mfg. Co., Wor-  
cester, Mass.

**Skates, Ice—**

Barney & Berry, Springfield, Mass.  
Crosby Co., Buffalo, N. Y.  
John H. Graham & Co., 113 Chambers  
St., New York.

Union Hardware Co., Torrington, Ct.  
Samuel Winslow Skate Mfg. Co., Wor-  
cester, Mass.

**Skates, Roller—**

Barney & Berry, Springfield, Mass.  
Richard Mfg. Co., Bloomsburg, Pa.  
Richardson Ball Bearing Skate Co., 501  
Wells St., Chicago, Ill.  
Union Hardware Co., Torrington, Ct.  
Samuel Winslow Skate Mfg. Co., Wor-  
cester, Mass.

**Skein Threading and Mill-  
ing Machines, Wagon—**  
National Machinery Co., Tiffin, O.

**Skelp, Iron and Steel—**

Carnegie Steel Co., Pittsburgh, Pa.  
Harrisburg Pipe & Pipe Bending Co.,  
Harrisburg, Pa.  
Interstate Iron & Steel Co., First Na-  
tional Bank Bldg., Chicago, Ill.  
La Belle Iron Works, Steubenville, O.  
Moorhead Bros. & Co., Inc., Pittsburgh,  
Pa.  
Youngstown Sheet & Tube Co., Young-  
town, O.

MERCHANTS.

Bourne-Fuller Co., Cleveland, O.  
C. B. Houston & Co., Girard Bldg.,  
Philadelphia, Pa.

Edmund W. Mudge & Co., Pittsburgh, Pa.  
Joseph T. Ryerson & Son, 18-22 Milwau-  
kee Ave., Chicago, Ill.  
Charles G. Stevens Co., 60 S. Canal St.,  
Chicago, Ill.

**Skewers, Butchers'—**

Landers, Frary & Clark, New Britain, Ct.  
Morgan Spring Co., Worcester, Mass.  
Parker Wire Goods Co., Worcester, Mass.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.  
U. S. Indestructible Gasket Co., 50  
Church St., New York.

**Skids—**

Boston & Lockport Block Co., East Bos-  
ton, Mass.

Kilbourne & Jacobs Mfg. Co., Colum-  
bus, O.

**Skillets, Double or Divid-  
ed—**

Northwestern Consolidated Iron & Steel  
Mfg. Co., Burlington, Ia.

**Skillets, Steel—**

(See Ware, Hollow Steel.)

**Skimmers—**

(See Kitchen Articles, Wire.)

**Skimmers and Stirrers, Cru-  
cible—**

McCullough-Dalzell Crucible Co., Pitts-  
burgh, Pa.

**Skimmers, Lard—**

(See Dippers and Skimmers, Lard.)

**Skimmers, Plate Steel—**

W. J. Clark Co., Salem, O.

**Skips, Mine—**

(See Cars, Skip.)

**Skirt Hanger—**

(See Hangers, Garment and Trousers.)

**Skylights—**

E. B. Badger & Sons Co., Boston, Mass.  
Burt Mfg. Co., Akron, O.  
Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.  
G. Drouve Co., Bridgeport, Ct.

- Slabbers, Log—**  
Humphrey Machine Co., Keene, N. H.  
Lane Mfg. Co., Montpelier, Vt.
- Slaters' Tools—**  
(See Tools, Slaters')
- Slats, Louver—**  
Youngstown Iron & Steel Roofing Co.,  
Youngstown, O.
- Slaw Cutters—**  
(See Cutters, Slaw.)
- Sledges and Hammers—**  
Heller Bros. Co., Newark, N. J.  
Hubbard & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Sledges, Blacksmiths'—**  
Hubbard & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Sledges, Coal and Stone—**  
Hubbard & Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Sledges, Horsehoers' Turning—**  
Hubbard & Co., Pittsburgh, Pa.
- Sleepers, Steel Railroad—**  
(See Ties.)
- Sleeves, Double Tang—**  
Cleveland Twist Drill Co., Cleveland, O.
- Sleeves, Dredging—**  
New York Belting & Packing Co., 91-93 Chambers St., New York.
- Sleeves, Drill—**  
Cleveland Twist Drill Co., Cleveland, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Morse Twist Drill & Machine Co.,** New Bedford, Mass.
- Standard Tool Co.,** Cleveland, O.
- Whitman & Barnes Mfg. Co.,** Chicago, Ill.
- Sleeves, Floor—**  
Beaton & Bradley Co., New Britain, Ct.
- Sleeves, Plumbago—**  
McCullough-Dalzell Crucible Co. Pittsburgh, Pa.
- Sleigh Bells—**  
(See Bells.)
- Sleigh Bell Straps—**  
(See Straps, Sleigh Bell.)
- Sleigh Shoe Bolts—**  
(See Bolts, Sleigh Shoe.)
- Slicers, Apple, for Power—**  
Goodell Co., Antrim, N. H.
- Slicers, Beef—**  
(See Cutters, Smoked Beef.)
- Slicers, Bread—**  
Holt-Lyon Co., Inc., Tarrytown, N. Y.
- Slicers, Vegetable and Fruit—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.  
Enterprise Mfg. Co. of Pa., Philadelphia, Pa.
- Kilbourne Mfg. Co.,** Troy, N. Y.
- Landers, Frary & Clark,** New Britain, Ct.
- Parker Wire Goods Co.,** Worcester, Mass.
- Slicks, Carpenters'—**  
Buck Bros., Millbury, Mass.
- Peck, Stow & Wilcox Co.,** 27 Murray St. New York.
- Swan Co.,** Seymour, Ct.
- L. & I. J. White Co.,** Buffalo, N. Y.
- Winsted Edge Tool Works,** Winsted, Ct.
- Slide Rests—** (See Rests, Slide.)
- Slides, Blanket—**  
Advance Mfg. Co., Racine, Wis.
- Slides, Desk—**  
Stanley Works, New Britain, Ct.
- Slides, Rope—**  
(See Clamps and Slides, Rope.)
- Sling Chains—**  
(See Chains, Sling.)
- Slings, Chain—**  
Woodward, Wight & Co., Ltd., New Orleans, La.
- Slings, Hay—**  
(See Haying Tools.)
- Slings, Rope—**  
Woodward, Wight & Co., Ltd., New Orleans, La.
- Slitting Machines, Metal—**  
(See also Shears, Slitting.)  
American Tube & Stamping Co., Bridgeport, Ct.  
Badger State Machine Co., Janesville, Wis.  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Blake & Johnson Co., Waterbury, Ct.  
E. W. Bliss Co., Brooklyn, N. Y.  
Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.  
Ferracute Machine Co., Bridgeton, N. J.  
Chas. Leffler & Co., Brooklyn, N. Y.  
Niagara Machine & Tool Works, Buffalo, New York.
- Niles-Bement-Pond Co.,** 111 Broadway, New York.
- George A. Ohl & Co.,** Newark, N. J.
- Henry Perkins Co.,** Bridgewater, Mass.
- Waterbury Farrel Foundry & Machine Co.,** Waterbury, Ct.
- Wickes Bros.,** Saginaw, Mich.
- Slitting Machines, Metal, Gang—**  
Blake & Johnson Co., Waterbury, Ct.  
Niagara Machine & Tool Works, Buffalo, N. Y.
- Slitting Machines, Paper—**  
Hobbs Mfg. Co., Worcester, Mass.
- Slitting Saws—**  
(See Saws, Slitting.)
- Slotted Head Bolts—**  
(See Bolts, Special.)
- Slotters, Bench, Screw—**  
Grant Mfg. & Machine Co., Bridgeport, Ct.
- Slotting and Slabbing Machines, Bicycle Nipple—**  
Garvin Machine Co., Spring & Varick Sts., New York.
- E. J. Manville Mach. Co.,** Waterbury, Ct.
- Slotting Attachments for Milling Machines—**  
Brown & Sharpe Mfg. Co., Providence, R. I.
- Manning, Maxwell & Moore, Inc.,** 85 Liberty St., New York.
- Slottling Machines—**  
Garvin Machine Co., Spring & Varick Sts., New York.
- Hendey Machine Co.,** Torrington, Ct.
- Harvey Hubbell,** Bridgeport, Ct.
- Manning, Maxwell & Moore, Inc.,** 85 Liberty St., New York.
- National-Arme Mfg. Co.,** Cleveland, O.
- New Haven Mfg. Co.,** New Haven, Ct.

Newton Machine Tool Works, 23d & Vine Sts., Philadelphia, Pa.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Slotting Machines, Locomotive Frame.**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Niles-Bement-Pond Co., 111 Broadway, New York.

**Slotting Machines, Portable.**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Newton Machine Tool Works, 23d and Vine Sts., Philadelphia, Pa.

**Slotting Machines, Screw Head.**  
Asa S. Cook Co., Hartford, Ct.  
Garvin Machine Co., Spring & Varick Sts., New York.  
Grant Mfg. & Machine Co., Bridgeport, Ct.

Hartford Machine Screw Co., Hartford, Ct.  
Harvey Hubbell, Bridgeport, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
E. J. Manville Machine Co., Waterbury, Ct.  
National-Acme Mfg. Co., Cleveland, O.  
Pratt & Whitney Co., Hartford, Ct.  
Taylor & Fenn Co., Hartford, Ct.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Slotting Screws, to Order.**  
Blake & Johnson Co., Waterbury, Ct.

**Smoketacks.**

(See Chimneys, Iron and Steel.)

**Snap Gauges.**

(See Gauges, Snap.)

**Snaps and Swivels, Halter.**

**Harness, &c.**

Covert Mfg. Co., Troy, N. Y.

**Snaps, Halter, Harness.**

**Rope, &c.**

Billings & Spencer Co., Hartford, Ct.  
Covert Mfg. Co., Troy, N. Y.  
North & Judd Mfg. Co., New Britain, Ct.

**Snatch Blocks.**

(See Blocks, Deck and Snatch.)

**Snaths.**

American Fork & Hoe Co., Cleveland, O.

**Sniffing Valves.**

(See Valves, Sniffing.)

**Snips, Dental.**

(See Shears and Snips, Dental.)

**Snips, Tinnerns.**

(See Shears and Snips, Tinnerns.)

**Snow Guards.**

(See Guards, Snow and Ice.)

**Snow Shovels.**

(See Shovels, Snow.)

**Soap Dishes, Trays.**

(See Dishes, Trays.)

**Soapstone Crayons.**

(See Crayons, Lumber, Marble, Metal Workers' &c.)

**Soapstone Griddles.**

(See Griddles, Soapstone.)

**Socket Bolts, Wrenches.**

(See Bolts, Wrenches.)

**Socket Bushings and Hooks.**

**Electric.**

(See Electric Light Fittings.)

**Sockets, Double Tang.**  
Cleveland Twist Drill Co., Cleveland, O.

**Sockets, Drill.**  
American Specialty Co., Monadnock Bldg., Chicago, Ill.  
Billings & Spencer Co., Hartford, Ct.  
Cleveland Twist Drill Co., Cleveland, O.  
Keystone Mfg. Co., Buffalo, N. Y.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Standard Tool Co., Cleveland, O.

Stow Flexible Shaft Co., 28th and Callowhill Sts., Philadelphia, Pa.

Whitman & Barnes Mfg. Co., Chicago.

**Sockets, Flag Pole.**

W. & J. Tiebout, 118 Chambers St., N. Y.

**Sockets, Ladder, Rung.**

Arcade Mfg. Co., Freeport, Ill.

**Sockets, Lathe.**

(See Sockets, Drill.)

**Sockets, Oil, Feeding.**

Cleveland Twist Drill Co., Cleveland, O.

**Sockets, Shaft, Yoke, Pole**

**and Whiffletree.**

(See Tips or Sockets, Shaft, Yoke, Pole and Whiffletree.)

**Sockets, Tool, Grip.**

Cleveland Twist Drill Co., Cleveland, O.

**Sockets, Whip.**

Fernald Mfg. Co., North East, Pa.

**Sockets, Wire Rope.**

Broderick & Bascom Rope Co., St. Louis.

Keystone Drop Forge Works, Chester, Pa.

Thomas Laughlin Co., Portland, Me.

A. Leichen & Sons Rope Co., St. Louis.

C. M. Mockbee, Cincinnati, O.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

J. H. Williams & Co., Brooklyn, N. Y.

**Soda Tanks.**

(See Tanks, Gas, Air, Soda, &c.)

**Soda Water Spoons.**

(See Spoons, Soda Water.)

**Softening Systems, Water.**

Harrison Safety Boiler Works, 3194 N. 17th St., Philadelphia, Pa.

Wm. B. Scaife & Sons Co., Pittsburg.

**Solder.**

Charles H. Besly & Co., 15-21 S. Clinton St., Chicago, Ill.

Empire Metal Co., Syracuse, N. Y.

Theo. Hertz Metal Co., St. Louis, Mo.

U. T. Hungerford Brass & Copper Co.,

497-505 Pearl St., New York.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Merchant & Evans Co., Philadelphia, Pa.

Charles Millar & Son Co., Utica, N. Y.

Pittsburgh White Metal Co., Pittsburgh.

Universal Fluxine Co., Urbana, O.

**Solder, Aluminum.**

Clum & Atkinson, Rochester, N. Y.

Janney, Steinmetz & Co., Philadelphia.

Universal Fluxine Co., Urbana, O.

**Solder, Braziers.**

Bridgeport Brass Co., 263 B'way, N. Y.

U. T. Hungerford Brass & Copper Co.,

497-505 Pearl St., New York.

Merchant & Evans Co., Philadelphia, Pa.

H. M. Shimer & Co., 19th St. & Wash-

ington Ave., Philadelphia, Pa.

**Solder, Silver, for Saws—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Henry Disston & Sons, Philadelphia, Pa.  
U. T. Hungerford Brass & Copper Co.,  
497-505 Pearl St., New York.

**Soldering Cap Hemming  
Machines—**

E. W. Bliss Co., Brooklyn, N. Y.  
**Soldering Copper Handles—**  
(See Handles, Soldering Copper.)

**Soldering Coppers, Sets—**  
(See Coppers, Sets.)

**Soldering Machines—**

E. W. Bliss Co., Brooklyn, N. Y.  
Chas. Leffler & Co., Brooklyn, N. Y.  
Niagara Machine & Tool Works, Buffalo,  
N. Y.

**Soldering Nipples—**  
(See Nipples, Soldering.)

**Solenoids—**

Electric Controller & Mfg. Co., Cleve-  
land, O.

**Soles and Soling, Rubber—**

New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Soles, Inner, Shoe—**

Graton & Knight Mfg. Co., Worcester,  
Mass.

**Solid Box Vises—**  
(See Vises, Solid Box.)

**Solid Metal Spoons and  
Forks—**  
(See Spoons and Forks.)

**Sounding Leads—**  
(See Leads, Sounding.)

**Sounding Machines and  
Sounders, Marine—**

Riggs & Bro., 310 Market St., Philadelphia.

**Sowers, Seed—**

Goodell Co., Antrim, N. H.

**Spacing Tables—**

Hilles & Jones Co., Wilmington, Del.

**Spade Handles—**  
(See Handles, Fork, Spade, &c.)

**Spades—**  
(See Shovels and Spades.)

**Spades, Butter—**

Goodell Co., Antrim, N. H.

**Spades, Grafting—**

Hubbard & Co., Pittsburgh, Pa.

**Spades, Post Hole—**

Hubbard & Co., Pittsburgh, Pa.

**Spades, Tiling—**

(See Shovels and Spades, Tiling and  
Ditching.)

**Spading Forks—**

(See Forks, Hay, Manure, Spading, &c.)

**Span Wire—**

(See Wires, Electrical.)

**Spanners, Carriage—**

J. H. Williams & Co., Brooklyn, N. Y.

**Spark Arresters—**  
(See Arresters, Spark.)

**Spark Guards—**  
(See Guards, Grate.)

**Spark Plug Parts—**  
(See Automobile Parts.)

**Sparking Points for Internal  
Combustion Engine—**

(See Points, Sparking, for Internal Com-  
bustion Engines.)

**Spatulas—**

American Cutlery Co., Chicago, Ill.  
Columbian Cutlery Co., Reading, Pa.  
Lauders, Frary & Clark, New Britain, Ct.

**Speaking Tube Hardware—**

W. R. Ostrander & Co., 22 Dey St.,  
New York.  
Reading Hardware Co., Reading, Pa.

**Speaking Tubes—**

(See Tubes, Speaking.)

**Spears, Fish—**

Arcade Mfg. Co., Freeport, Ill.  
Dame, Stoddard & Co., Boston, Mass.

**Special Machinery—**

Abendroth & Root Mfg. Co., Newburgh,  
N. Y.

Adriance Machine Works, Brooklyn, N. Y.

Alliance Machine Co., Alliance, O.

Automatic Machine Co., Bridgeport, Ct.

Baird Machine Co., Oakville, Ct.

Barbour-Stockwell Co., Cambridgeport,  
Mass.

Birds-Ecro Steel Foundry & Machine Co.,  
Birdsboro, Pa.

Blake & Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Bridgeport Deoxidized Bronze & Metal  
Co., Bridgeport, Ct.

Clark Novelty Co., Rochester, N. Y.

R. M. Clough, Tolland, Ct.

Asa S. Cook Co., Hartford, Ct.

H. C. Cook & Co., Ansonia, Ct.

W. P. Davis Machine Co., Rochester, N. Y.

Detrick & Harvey Machine Co., Balti-  
more, Md.

Earle Gear & Machine Co., Stenton and  
Wyoming Ave., Philadelphia, Pa.

Eastern Machine & Stamping Co., Provi-  
dence, R. I.

Eastern Machinery Co., New Haven, Ct.

Chas. F. Elmes Engineering Works, 253-  
259 Fulton St., Chicago, Ill.

Empire Foundry Co., New Brunswick,  
N. J.

Espen-Lucas Machine Co., Broad and  
Noble Sts., Philadelphia, Pa.

Fawcus Machine Co., Pittsburgh, Pa.

Ferracute Machine Co., Bridgeton, N. J.

Foot Bros. Gear & Machine Co., 24-30  
Clinton St., Chicago, Ill.

Franklin Mfg. Co., New Haven, Ct.

Wm. Gardam & Son, Inc., 221 Fulton  
St., New York.

A. Garrison Foundry Co., Pittsburgh, Pa.

Garvin Machine Co., Spring & Varick  
Sts., New York.

Geometric Tool Co., New Haven, Ct.

Globe Machine & Stamping Co., Cleve-  
land, O.

Gould & Eberhardt, Newark, N. J.

Grant Mfg. & Machine Co., Bridgeport,  
Ct.

E. Harrington, Son & Co., Inc., Phila-  
delphia, Pa.

W. H. Hibbard Mfg. Co., Brooklyn, N. Y.

Hill, Clarke & Co., Boston, Mass.

Hoefler Mfg. Co., Freeport, Ill.

Humphrey Machine Co., Keene, N. H.

I. H. Johnson, Jr. Co., Inc., 337 N. 15th  
St., Philadelphia, Pa.

J. E. Kidder, Worcester, Mass.

W. B. Knight Machinery Co., St. Louis,  
Mo.

E. Konigsloew Stamping & Tool Works  
Cleveland, O.

Otto Konigsloew Mfg. Co., Cleveland, O.

R. K. LeBlond Machine Tool Co., Cin-  
cinnati, O.

Chas. Leffler & Co., Brooklyn, N. Y.  
 Marshall & Huschart Machinery Co., 62  
 S. Canal St., Chicago, Ill.  
 W. A. Jones Foundry & Machine Co.,  
 142-164 W. North Ave., Chicago, Ill.  
 Manning, Maxwell & Moore, Inc., 85 Lib-  
 erty St., New York.  
 Joseph Merritt, Hartford, Ct.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Morgan Construction Co., Worcester, Mass.  
 Morgan Engineering Co., Alliance, O.  
 Frank Mossberg Co., Attleboro, Mass.  
 Mossberg Wrench Co., Central Falls, R. I.  
 National Machinery Co., Tiffin, O.  
 National Sewing Machine Co., Belvidere,  
 Ill.  
 Newark Gear Cutting Machine Co., New-  
 ark, N. J.  
 New Britain Machine Co., New Britain,  
 Ct.  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.  
 A. H. Nilson Machine Co., Bridgeport,  
 Ct.  
 R. D. Nuttall Co., Pittsburgh, Pa.  
 George A. Ohl & Co., Newark, N. J.  
 Pacific Iron Works, Bridgeport, Ct.  
 Pawtucket Mfg. Co., Pawtucket, R. I.  
 Poole Engineering & Machine Co., Balti-  
 more, Md.  
 Pratt & Whitney Co., Hartford, Ct.  
 Thos. Prosser & Son, 26 Platt St., N. Y.  
 Richard Mfg. Co., Bloomsburg, Pa.  
 Richmond Forgings Corporation, Rich-  
 mond, Va.  
 Robinson Tool Works, Waterbury, Ct.  
 Royersford Foundry & Machine Co.,  
 Royersford, Pa.  
 John W. Seaver, Cleveland, O.  
 F. B. Shuster Co., New Haven, Ct.  
 Sigourney Tool Co., Hartford, Ct.  
 Standard Engineering Co., Ellwood City,  
 Pa.  
 Stoeber Foundry & Mfg. Co., Myerstown,  
 Pa.  
 Stow Flexible Shaft Co., 26th & Callow-  
 hill Sts., Philadelphia, Pa.  
 Taylor & Fenn Co., Hartford, Ct.  
 Torrington Mfg. Co., Torrington, Ct.  
 Turner Brass Works, Sycamore, Ill.  
 United Engineering & Foundry Co., Pitts-  
 burgh, Pa.  
 V. & O. Press Co., Brooklyn, N. Y.  
 Vilter Mfg. Co., Milwaukee, Wis.  
 Waltham Machine Works, Waltham, Mass.  
 Walton Co., Hartford, Ct.  
 A. O. Walworth & Co., 143-147 Clinton  
 St., Chicago, Ill.  
 Washburn Shops, Worcester, Mass.  
 Waterbury Farrel Foundry & Machine  
 Co., Waterbury, Ct.  
 Watson-Stillman Co., 53 Church St., N. Y.  
 Webster & Perks Tool Co., Springfield, O.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 A. D. White Machinery Co., 39-41 S.  
 Canal St., Chicago, Ill.  
 Whiting Foundry Equipment Co., Har-  
 vey, Ill.  
 Wickes Bros., Saginaw, Mich.  
 W. A. Wilson Machine Co., Rochester,  
 N. Y.  
 Zeh & Hahnmann Co., Newark, N. J.

**Special Screws, Wire—**

(See Screws, Special.)

**Special Shapes on Tubular Form—**

Standard Welding Co., Cleveland, O.

**Special Wire Forming Machinery—**

(See Forming Machinery, Wire.)

**Specialties to Order, Metal—**

(See Metal Specialties to Order.)

**Specialties, Turned Metal—**

(See Metal Work, Milled or Turned.)

**Specialties, Wooden—**

(See Wooden Specialties.)

**Speed Changers—**

Variable Speed Clutch Co., Milwaukee,  
 Wis.

**Speed Counters—**

Veeder Mfg. Co., Hartford, Ct.

**Spelter—**

American Metal Co., 52 Broadway, N. Y.

American Zinc Lead & Smelting Co.,  
 Boston, Mass.

Hegler Bros., Danville, Ill.

Theo. Hiertz Metal Co., St. Louis, Mo.

Illinois Zinc Co., Peru, Ill.

Matthiessen & Hegeler Zinc Co., La  
 Salle, Ill.

Sandoral Zinc Co., 122 N. Peoria St., Chi-  
 cago, Ill.

H. M. Shimer & Co., 49th St. and Wash-  
 ington Ave., Philadelphia, Pa.

**MERCHANTS.**

American Metal Co., 52 Broadway, N. Y.

Empire Metal Co., Syracuse, N. Y.

Hendricks Bros., 49 Cliff St., New York.

Merchant & Evans Co., Philadelphia, Pa.

**Spelter, Brazing—**

(See Brass, Brazing.)

**Spiders, Steel—**

(See Ware, Hollow Steel.)

**Spiegeleisen—**

Carnegie Steel Co., Pittsburgh, Pa.

**Spike Machinery—**

National Machinery Co., Tiffin, O.

**Spikes, Boat—**

American Iron & Steel Mfg. Co., Leb-  
 anon, Pa.

American Steel & Wire Co., Commercial  
 National Bank Bldg., Chicago, Ill.

M. Lanz & Sons, Pittsburgh, Pa.

New Castle Forge & Bolt Co., New  
 Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Spikes, Dock, Wharf, &c.—**

American Iron & Steel Mfg. Co., Leb-  
 anon, Pa.

Samuel Hall's Sons, 229-233 W. 10th St.,  
 New York.

Jones & Laughlin Steel Co., Pittsburgh.

M. Lanz & Sons, Pittsburgh, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.

Pittsburgh Mfg. Co., Pittsburgh, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

Youngstown Sheet & Tube Co., Youngs-  
 town, O.

**Spikes, Galvanized—**

American Iron & Steel Mfg. Co., Leb-  
 anon, Pa.

Cleveland Galvanizing Works, Cleveland, O.

**Spikes, Marlin, Pickers, &c.—**

Thomas Laughlin Co., Portland, Me.

W. & J. Tiebout, 118 Chambers St.,  
 N. Y.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Spikes, Railroad—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Jones & Laughlin Steel Co., Pittsburgh.  
Arthur Koppel Co., Pittsburgh, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Ernst Wiener Co., Church and Fulton Sts., New York.

**Spikes, Screw—**  
New Castle Forge & Bolt Co., New Castle, Pa.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

**Spindles, Carriage and Furniture—**  
W. E. Hartigan, Collinsville, Ct.

**Spindles, Clamp—**  
Gem Mfg. Co., Pittsburgh, Pa.

**Spindles, Cream Separator—**  
Standard Welding Co., Cleveland, O.

**Spinning Chucks—**  
(See Chucks, Spinning.)

**Spinning Machines, Rivet—**  
Grant Mfg. & Machine Co., Bridgeport.

**Spinning, Metal—**  
Bancroft & Co., Philadelphia, Pa.  
Goodwin & Kintz Co., Winsted, Ct.  
Turner Brass Works, Sycamore, Ill.

**Spiral Conveyors—**  
(See Conveyors, Steel Screw.)

**Spittoons—**(See Cuspidors.)

**Splice Bars—**  
Carnegie Steel Co., Pittsburgh, Pa.  
Lackawanna Steel Co., 2 Rector St., N. Y.  
Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

**Splicers, Wire—**  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Irrington Mfg. Co., Irrington, N. J.  
Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

Otis A. Smith, Rockfall, Ct.  
(See also Pliers, Knot Tying.)

**Splicing Clamps—**  
(See Clamps, Splicing.)

**Splicing—**  
Screw Cutting Co. of America, 150 Berkeley St., Philadelphia, Pa.

**Spinning Machines—**  
Pratt & Whitney Co., Hartford, Ct.

**Splitters, Beef and Pork—**  
(See Cleavers.)

**Splitting Machines, Belt Knife—**

American Tool & Machine Co., Boston.

**Smoke Header and Bender, Bicycle—**

Garvin Machine Co., Spring and Varick Sts., New York.

E. J. Manville Machine Co., Waterbury, Ct.

**Smoke Pointers, Shaves, Trimmers—**  
(See Pointers, Shaves Trimmers.)

**Smoke Tenon Machines—**  
Silver Mfg. Co., Salem, O.

**Spoke Threaders, Bicycle—**  
(See Threaders, Bicycle Spoke.)

**Spoke Wire, Bicycle—**  
(See Wire, Bicycle Spoke.)

**Spokes, Automobile and Bicycle—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Wire Goods Co., Worcester, Mass.

**Spokes, Road Roller Wheel—**

New Castle Forge & Bolt Co., New Castle, Pa.

**Spokes, Sulky—**  
Wire Goods Co., Worcester, Mass.

**Sponge Baskets—**  
(See Baskets, Sponge.)

**Spoiled Wire—**  
(See Wire, Spoiled.)

**Spools, Sheet Metal—**  
(See Reels, Sheet Metal.)

**Spoon Holders—**  
(See Holders, Spoon, Silver Plated.)

**Spoon Trays—**  
(See Trays, Card, &c., Silver Plated.)

**Spoons and Forks, Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

Landers, Frary & Clark, New Britain, Ct.

**Spoons, Ice Cream—**  
Erie Specialty Co., Erie, Pa.

**Spoons, Measuring—**  
Landers, Frary & Clark, New Britain, Ct.

**Spoons, Soda Water—**  
International Silver Co., Meriden, Ct.

**Spoons, Telegraph—**  
(See Shovels, Spades and Spoons, Pole Hole.)

**Spoons, Tinned—**  
Lalanc & Grosjean Mfg. Co., 289 Broadway, New York.

Charles Parker Co., Meriden, Ct.

**Spoons, Vegetable—**  
Landers, Frary & Clark, New Britain, Ct.

**Sporting Goods, Jobbers—**  
(See Jobbers, Hardware, Cutlery, Tools, Sporting Goods, &c.)

**Spots, Harness—**  
Judson L. Thomson Mfg. Co., Waltham, Mass.

**Spouts, Grain—**  
H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. J. Clark Co., Salem, O.

**Spouts, Oil—**  
Gem Mfg. Co., Pittsburgh, Pa.

Maple City Mfg. Co., Monmouth, Ill.

**Spouts, Sap—**  
Charles Millar & Son Co., Utica, N. Y.

**Sprayers, Crop, Horse—**  
Bateman Mfg. Co., Grenloch, N. J.

**Spraying Pumps—**  
(See Pumps, Spraying.)

**Spreaders, Glue—**  
Advance Machinery Co., Toledo, O.

**Spring Balances—**  
(See Balances.)

**Spring Coiling Machines—**

Baird Machine Co., Oakville, Ct.

Blake & Johnson Co., Waterbury, Ct.

Garvin Machine Co., Spring and Varick Sts., New York.

E. J. Manville Machine Co., Waterbury, Ct.

**Springs, Adding Machine—**  
Peck & Way Mfg. Co., Forestville, Ct.

**Springs, Agricultural Im-**  
**plement—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Cary Spring Works, 240-242 W. 29th St.,  
New York.

Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

Wm. D. Gibson Co., Huron and Kings-  
bury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

**Springs, Air Brake—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Cary Spring Works, 240-242 W. 29th St.,  
New York.

Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Kilborn & Bishop Co., New Haven, Ct.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

**Springs, Automobile—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Wallace Barnes Co., Bristol, Ct.

Cary Spring Works, 240-242 W. 29th St.,  
New York.

Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken,  
N. J.

Thomas Prosser & Son, 26 Platt St., N. Y.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

**Springs, Baby Carriage—**

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

**Springs, Baby Jumper—**

Wm. D. Gibson Co., Huron and Kings-  
bury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

**Springs, Bed—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

**Springs, Bicycle—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Wallace Barnes Co., Bristol, Ct.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.

Thick Mfg. Co., Brockton, Mass.

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

**Springs, Bird Cage—**

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Andrew B. Hendryx Co., New Haven, Ct.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken,  
N. J.

Parker Wire Goods Co., Worcester, Mass.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.

Turner & Stanton Co., Norwich, Ct.

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

Wire Goods Co., Worcester, Mass.

**Springs, Bobbin Ring—**

Wallace Barnes Co., Bristol, Ct.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

**Springs, Brake—**

Fernald Mfg. Co., North East, Pa.

Wm. D. Gibson Co., Huron and Kings-  
bury Sts., Chicago, Ill.

Morgan Spring Co., Worcester, Mass.

Raymond Mfg. Co., Corry, Pa.

Union Spring & Mfg. Co., New Kensing-  
ton, Pa.

**Springs, Buggy Boot—**

Fernald Mfg. Co., North East, Pa.

Wm. D. Gibson Co., Huron and Kings-  
bury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.



Miller Wire Spring Co., Bridgeport, Ct.  
Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington,  
Pa.

#### **Springs, Car—**

American Steel Foundries, 42 Broadway,  
New York.

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Farist Steel Co., Bridgeport, Ct.  
Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Union Spring & Mfg. Co., New Kensington,  
Pa.

#### **Springs, Car, Railroad Truck—**

Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

#### **Springs, Carriage, Wagon, &c.—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Morgan Spring Co., Worcester, Mass.

Railway Steel Spring Co., 71 Broadway,  
New York.

Union Spring & Mfg. Co., New Kensington,  
Pa.

#### **Springs, Cash Register—**

Peck & Way Mfg. Co., Forestville, Ct.

#### **Springs, Chair—**

(See Springs, Furniture and Upholstery.)

#### **Springs, Check—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Wallace Barnes Co., Bristol, Ct.

Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.

New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.

Union Spring & Mfg. Co., New Kensington,  
Pa.

Union Nut Co., Cleveland, O.

#### **Springs, Cleaner—**

Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Wm. H. Haskell Mfg. Co., Pawtucket, R.I.

Miller & Van Winkle, Brooklyn, N. Y.

New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Union Spring & Mfg. Co., New Kensington,  
Pa.

#### **Springs, Clock—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Ansonia Clock Co., 99 John St., N. Y.

Wallace Barnes Co., Bristol, Ct.

Cary Spring Works, 240 W. 29th St., N. Y.

Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.

New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Union Spring & Mfg. Co., New Kensington,  
Pa.

Washburn Wire Co., Phillipsdale, R. I.

#### **Springs, Coil—**

(See Springs, Steel.)

#### **Springs, Compression—**

Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

Wm. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.

Miller Wire Spring Co., Bridgeport, Ct.

New York Wire & Spring Co., Hoboken,  
N. J.

Raymond Mfg. Co., Corry, Pa.

Union Spring & Mfg. Co., New Kensington,  
Pa.

#### **Springs, Couch—**

(See Springs, Furniture and Upholstery.)

#### **Springs, Cutter Bar—**

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.

Morgan Spring Co., Worcester, Mass.

New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.

Union Spring & Mfg. Co., New Kensington,  
Pa.

#### **Springs, Dairy—**

Fort Pitt Spring & Mfg. Co., Pittsburgh,  
Pa.

Union Spring & Mfg. Co., New Kensington,  
Pa.

#### **Springs, Derrick—**

Farist Steel Co., Bridgeport, Ct.

Miller & Van Winkle, Brooklyn, N. Y.

New York Wire & Spring Co., Hoboken,  
N. J.

Railway Steel Spring Co., 71 Broadway,  
New York.

Raymond Mfg. Co., Corry, Pa.

Union Spring & Mfg. Co., New Kensington,  
Pa.

#### **Springs, Door—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Arcade Mfg. Co., Freeport, Ill.

Wallace Barnes Co., Bristol, Ct.

Rommer Bros., Brooklyn, N. Y.

Caldwell Mfg. Co., Rochester, N. Y.

John Chatillon & Sons, 85 Cliff St., N. Y.

Chicago Spring Butt Co., Chicago, Ill.

W. D. Gibson Co., Huron and Kingsbury  
Sts., Chicago, Ill.

Lawrence Bros., Sterling, Ill.

Miller & Van Winkle, Brooklyn, N. Y.

Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken, N. J.

Parker Wire Goods Co., Worcester, Mass.  
Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
Reading Hardware Co., Reading, Pa.  
Union Mfg. Co., New Britain, Ct.  
Union Spring & Mfg. Co., New Kensington, Pa.

Wire Goods Co., Worcester, Mass.

**Springs, Draught—**  
Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.

Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
Miller & Van Winkle, Brooklyn, N. Y.  
New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.  
Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Drill—**  
Wallace Barnes Co., Bristol, Ct.  
W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.  
Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.  
Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Electrical Equipment—**  
Wallace Barnes Co., Bristol, Ct.  
Cary Spring Works, 210-242 W. 29th St., New York.

Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.  
W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Kilborn & Bishop Co., New Haven, Ct.  
Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.  
Morgan Spring Co., Worcester, Mass.

New York Wire & Spring Co., Hoboken, N. J.  
Railway Steel Spring Co., 71 Broadway, New York.  
Raymond Mfg. Co., Corry, Pa.

Union Spring & Mfg. Co., New Kensington, Pa.  
**Springs, Elliptic—**  
American Steel Foundries, 42 Broadway, New York.

Farist Steel Co., Bridgeport, Ct.  
Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Exerciser—**  
W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
Miller & Van Winkle, Brooklyn, N. Y.

New York Wire & Spring Co., Hoboken, N. J.  
Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Extension—**  
Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.

Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.  
New York Wire & Spring Co., Hoboken, N. J.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Fender, Car—**  
Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
Miller & Van Winkle, Brooklyn, N. Y.  
New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.  
Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Folding Cart—**  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Friction Washer—**  
Wallace Barnes Co., Bristol, Ct.  
W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.  
Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Furniture and Upholstery—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken, N. J.  
Railway Steel Spring Co., 71 Broadway, New York.

Union Spring & Mfg. Co., New Kensington, Pa.  
**Springs, Gas Engine—**  
Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.  
New York Wire & Spring Co., Hoboken, N. J.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.  
**Springs, Gate—**  
Morgan Spring Co., Worcester, Mass.

Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Go-Cart—**

Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Governor—**

Wallace Barnes Co., Bristol, Ct.  
 Cary Spring Works, 240-242 W. 29th St., New York.  
 Farist Steel Co., Bridgeport, Ct.  
 Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Grease Cup—**

Wallace Barnes Co., Bristol, Ct.  
 Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Gun—**

Wallace Barnes Co., Bristol, Ct.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Hatch Door—**

Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Hay Loader—**

Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Raymond Mfg. Co., Corry, Pa.  
 Sabin Machine Co., Montpelier, Vt.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Hay Rake—**

Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Raymond Mfg. Co., Corry, Pa.  
 Sabin Machine Co., Montpelier, Vt.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Hinge—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Bommer Bros., Brooklyn, N. Y.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Jig—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Lamp—**

Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Lever—**

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Loader Teeth—**

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Locomotive—**

Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.

**Springs, Loom—**

Wallace Barnes Co., Bristol, Ct.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.

New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Machine—**

Wallace Barnes Co., Bristol, Ct.  
 Cary Spring Works, 240-242 W. 29th St., New York.  
 Farist Steel Co., Bridgeport, Ct.  
 Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Motor—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Wallace Barnes Co., Bristol, Ct.  
 Cary Spring Works, 240-242 W. 29th St., New York.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.  
 Union Spring & Mfg. Co., New Kensington, Pa.  
 Washburn Wire Co., Phillipsdale, R. I.

**Springs, Oil Tempered—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Wallace Barnes Co., Bristol, Ct.  
 Cary Spring Works, 240-242 W. 29th St., New York.  
 John Chatillon & Sons, 85 Cliff St., New York.  
 Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Kilborn & Bishop Co., New Haven, Ct.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Organ and Piano—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Wallace Barnes Co., Bristol, Ct.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Piano Players'—**

Wallace Barnes Co., Bristol, Ct.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Plow—**

Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Pump Valve—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Wallace Barnes Co., Bristol, Ct.  
 Cary Spring Works, 240-242 W. 29th St., New York.  
 Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Railroad Track**

**Scraper—**  
 Farist Steel Co., Bridgeport, Ct.  
 Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Rocker—**

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.

New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Sash—**

Wallace Barnes Co., Bristol, Ct.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Scale—**

Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Seat and Back—**

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Sheaf Carrier—**

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Shuttle—**

American Tube & Stamping Co., Bridgeport, Ct.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Spiral—**

(See Springs, Steel.)

#### **Springs, Squaring Shear—**

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 & Van Winkle, Brooklyn, N. Y.

New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Steel—**

American Steel & Wire Co., The Rookery, Chicago, Ill.  
 Wallace Barnes Co., Bristol, Ct.  
 Cary Spring Works, 240-242 W. 29th St., New York.  
 Dunbar Bros. Co., Bristol, Ct.  
 Farist Steel Co., Bridgeport, Ct.  
 Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.  
 W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 R. C. Jenkinson & Co., Newark, N. J.  
 Kilborn & Bishop Co., New Haven, Ct.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Parker Wire Goods Co., Worcester, Mass.  
 Peck & Way Mfg. Co., Forestville, Ct.  
 Thomas Prosser & Son, 26 Platt St., N. Y.  
 Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
 Tuck Mfg. Co., Brockton, Mass.  
 Union Spring & Mfg. Co., New Kensington, Pa.

(See also Springs, Oil Tempered.)

#### **Springs, Switch—**

Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.

#### **Springs, Talking Machine—**

Wallace Barnes Co., Bristol, Ct.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Tedder Fork—**

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Railway Steel Spring Co., 71 Broadway, New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Trace—**

Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 New York Wire & Spring Co., Hoboken, N. J.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Trolley—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Cary Spring Works, 240-242 W. 29th St., New York.  
 Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Typewriter—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Wallace Barnes Co., Bristol, Ct.  
Cary Spring Works, 240-242 W. 29th St., New York.

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken, N. J.

Peck & Way Mfg. Co., Forestville, Ct.  
Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
Tuck Mfg. Co., Brockton, Mass.

Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Valve—**

Ashton Valve Co., Boston, Mass.  
Wallace Barnes Co., Bristol, Ct.

Cary Spring Works, 240-242 W. 29th St., New York.

Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Vanadium—**

Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.

#### **Springs, Wagon Brake—**

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Morgan Spring Co., Worcester, Mass.

New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

#### **Springs, Wagon Pole—**

Cary Spring Works, 240-242 W. 29th St., New York.

Fernald Mfg. Co., North East, Pa.  
W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Miller Wire Spring Co., Bridgeport, Ct.

Morgan Spring Co., Worcester, Mass.  
New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Wagon Seat—**  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Washing Machine—**  
Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Watch—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Cary Spring Works, 240-242 W. 29th St., New York.

Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Wind Mill—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Farist Steel Co., Bridgeport, Ct.  
Fort Pitt Spring & Mfg. Co., Pittsburgh, Pa.

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Morgan Spring Co., Worcester, Mass.

New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.

Raymond Mfg. Co., Corry, Pa.  
Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Window—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Cary Spring Works, 240-242 W. 29th St., New York.

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
Morgan Spring Co., Worcester, Mass.

Railway Steel Spring Co., 71 Broadway, New York.

Reading Hardware Co., Reading, Pa.  
Stanley Works, New Britain, Ct.

Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Window Screen—**  
Wallace Barnes Co., Bristol, Ct.

Caldwell Mfg. Co., Rochester, N. Y.  
Wm. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Miller & Van Winkle, Brooklyn, N. Y.  
New York Wire & Spring Co., Hoboken, N. J.

Railway Steel Spring Co., 71 Broadway, New York.

Union Spring & Mfg. Co., New Kensington, Pa.

**Springs, Window Shade—**  
Morgan Spring Co., Worcester, Mass.

**Springs, Wire—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Wallace Barnes Co., Bristol, Ct.  
 Cary Spring Works, 240-242 W. 29th St.,  
 New York.  
 John Chatillon & Sons, 85 Cliff St., N. Y.  
 Dunbar Bros. Co., Bristol, Ct.  
 Fort Pitt Spring & Mfg. Co., Pittsburgh,  
 Pa.  
 W. D. Gibson Co., Huron and Kingsbury  
 Sts., Chicago, Ill.  
 R. C. Jenkinson & Co., Newark, N. J.  
 Ludlow-Saylor Wire Co., St. Louis, Mo.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken,  
 N. J.  
 Parker Wire Goods Co., Worcester, Mass.  
 Railway Steel Spring Co., 71 Broadway,  
 New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Tuck Mfg. Co., Brockton, Mass.  
 Union Spring & Mfg. Co., New Kensington,  
 Pa.

**Springs, Wringer—**  
 American Steel & Wire Co., Commercial  
 National Bank Bldg., Chicago, Ill.  
 Fort Pitt Spring & Mfg. Co., Pittsburgh,  
 Pa.  
 W. D. Gibson Co., Huron and Kingsbury  
 Sts., Chicago, Ill.  
 Miller Wire Spring Co., Bridgeport, Ct.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 New York Wire & Spring Co., Hoboken,  
 N. J.  
 Parker Wire Goods Co., Worcester, Mass.  
 Railway Steel Spring Co., 71 Broadway,  
 New York.  
 Raymond Mfg. Co., Corry, Pa.  
 Union Spring & Mfg. Co., New Kensington,  
 Pa.

**Sprinklers, Lawn—**  
 Beaton & Bradley Co., New Britain, Ct.  
 Enterprise Mfg. Co. of Pa., Philadelphia,  
 Pa.  
 Hero Fruit Jar Co., East Letterly St.,  
 Philadelphia, Pa.  
 Edward S. Hotchkiss, Bridgeport, Ct.  
 Humphreys Mfg. Co., Mansfield, O.  
 F. E. Kohler & Co., Canton, O.  
 Landers, Frary & Clark, New Britain, Ct.  
 John H. McGowan Co., Cincinnati, O.  
 Philadelphia Lawn Mower Co., 3100-3109  
 Chestnut St., Philadelphia, Pa.

**Sprinklers, Water—**  
 (See Cans, Sprinkling.)

**Sprocket Wheel Cutters—**  
 (See Cutters, Sprocket Wheel.)

**Sprocket Wheels—**  
 (See Wheels, Sprocket.)

**Spuds, Bark—**  
 L & I. J. White Co., Buffalo, N. Y.  
**Spuds, Tobacco and Dandelion—**  
 American Fork & Hoe Co., Cleveland, O.  
 Geo. H. Bishop & Co., Cincinnati, O.  
 F. E. Kohler & Co., Canton, O.

**Square, Riding—**  
 North & Judd Mfg. Co., New Britain, Ct.  
**Square and Gauge Combined—**  
 (See Gauge and Square, Combined.)

**Square Levels—**  
 (See Levels, Bit and Square.)

**Squares, Caliper—**  
 Brown & Sharpe Mfg. Co., Providence,  
 R. I.  
 L. S. Starrett Co., Athol, Mass.

**Squares, Center—**  
 Brown & Sharpe Mfg. Co., Providence,  
 R. I.  
 Hoggson & Pettis Mfg. Co., New Haven,  
 Ct.

L. S. Starrett Co., Athol, Mass.  
**Squares, Combination—**  
 Brown & Sharpe Mfg. Co., Providence,  
 R. I.  
 Goodell-Pratt Co., Greenfield, Mass.  
 L. S. Starrett Co., Athol, Mass.

**Squares, Double—**  
 L. S. Starrett Co., Athol, Mass.

**Squares, Iron and Steel—**  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Henry Diaston & Sons, Philadelphia, Pa.  
 C. E. Jennings & Co., 42 Murray St.,  
 New York.

Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette  
 St., New York.

L. S. Starrett Co., Athol, Mass.  
 Wiebusch & Hilger, Ltd., 106-110 Lafayette  
 St., New York.

**Squares, Machinists'—**  
 Brown & Sharpe Mfg. Co., Providence,  
 R. I.

Henry Diaston & Sons, Philadelphia, Pa.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.  
 L. S. Starrett Co., Athol, Mass.

**Squares, T—**  
 Henry Diaston & Sons, Philadelphia, Pa.  
 Keuffel & Esser Co., 127 Fulton St., N. Y.  
 L. S. Starrett Co., Athol, Mass.

**Squares, Try and Miter—**  
 Brown & Sharpe Mfg. Co., Providence,  
 R. I.

Henry Diaston & Sons, Philadelphia, Pa.  
 Goodell-Pratt Co., Greenfield, Mass.  
 C. E. Jennings & Co., 42 Murray St.,  
 New York.

Keuffel & Esser Co., 127 Fulton St., N. Y.  
 National Saw Co., Newark, N. J.  
 Stanley Rule & Level Co., New Britain, Ct.  
 L. S. Starrett Co., Athol, Mass.  
 Wiebusch & Hilger, Ltd., 106-110 Lafayette  
 St., New York.

**Squaring Instruments—**  
 (See Instruments, Leveling and Squaring.)

**Squeezers, Lemon—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Erie Specialty Co., Erie, Pa.  
 Landers, Frary & Clark, New Britain, Ct.  
 Charles Parker Co., Meriden, Ct.  
 John Sommer Fancut Co., Newark, N. J.  
 Taplin Mfg. Co., New Britain, Ct.  
 Wrightsville Hardware Co., Wrightsville,  
 Pa.

**Squeezers, Lime—**  
 Erie Specialty Co., Erie, Pa.

**Squeezers, Puddle Ball—**  
 Mesta Machine Co., Pittsburgh, Pa.  
 Philadelphia Roll & Machine Co., 23d St.  
 & Washington Ave., Philadelphia.  
 United Engineering & Foundry Co.,  
 Pittsburgh, Pa.

**Squeezing Machines, Can-**  
E. W. Bliss Co., Brooklyn, N. Y.  
Chas. Leffler & Co., Brooklyn, N. Y.  
Niagara Machine & Tool Works, Buffalo.

**Stable Fixtures-**  
Bethlehem Foundry & Machine Co.,  
South Bethlehem, Pa.  
Buffalo Wire Works Co., Buffalo, N. Y.  
S. Cheney & Son, Manlius, N. Y.  
Edward Darby & Sons, 233-235 Arch St.,  
Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Estey Wire Works, 59 Fulton St., N. Y.  
Gilbert & Bennett Mfg. Co., 277 Broad-  
way, New York.  
Glen Mfg. Co., Ellwood City, Pa.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
National Iron & Wire Co., Cleveland, O.  
Nimmo Fence & Wire Works Co., Nor-  
wood, O.

Stewart Iron Works Co., Cincinnati, O.  
W. S. Tyler Co., Cleveland, O.  
Van Dorn Iron Works Co., Cleveland, O.  
Wright Wire Co., Worcester, Mass.

**Stackers for Lumber-**  
Soule Steam Feed Works, Meridian, Miss.  
**Stacks, Steel-**  
(See Chimneys, Iron and Steel.)

**Stains, Shingle, Wood, &c.-**  
Samuel Cabot, Inc., Boston, Mass.  
Martin-Senour Co., 2514 Quarry St., Chi-  
cago, Ill.

**Stains, Varnish-**  
Carpenter-Morton Co., Boston, Mass.

**Stains, Waterproof, Cement  
and Brick-**

Samuel Cabot, Inc., Boston, Mass.  
**Stair Treads, Brass-**  
(See Plates, Brass Step.)

**Stairs, Iron and Steel-**  
Bethlehem Foundry & Machine Co.,  
South Bethlehem, Pa.

Chattanooga Roofing & Foundry Co.,  
Chattanooga, Tenn.

Forest City Steel & Iron Co., Cleveland.

Glen Mfg. Co., Ellwood City, Pa.  
G. Haarmann & Son, Holyoke, Mass.

W. N. Kratzer & Co., Pittsburgh, Pa.  
Fred J. Meyers Mfg. Co., Hamilton, O.

Petroleum Iron Works Co., Sharon, Pa.  
Stewart Iron Works Co., Cincinnati, O.

W. S. Tyler Co., Cleveland, O.  
Van Dorn Iron Works Co., Cleveland, O.

**Stake Chains-**  
(See Chains, Wagon and Fancy.)

**Stake Holders, Wagon-**  
(See Holders, Stake Wagon.)

**Stakes, Cornice Makers-**  
Niagara Machine & Tool Works, Buffalo,  
N. Y.

**Stakes, Tinner's-**  
Niagara Machine & Tool Works, Buffalo.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

**Staking Out Chains-**  
(See Chains, Picket, &c.)

**Stall Hitchers-**  
(See Posts, Hitching.)

**Stamp Mill Wearing Parts-**  
Chrome Steel Works, Chrome, N. J.

**Stamped Metal Work to  
Order-**

(See Metal Work, Sheet, Spun, Drawn or  
Stamped to Order, and Metal Work,

Milled or Turned, to Order; also  
Sheet Metal Work.)

**Stamping, Sheet Metal-**

Adriance Machine Works, Brooklyn, N. Y.  
Advance Mfg. Co., Racine Junction, Wis.  
American Sheet and Tin Plate Co., Pitts-  
burgh, Pa.

American Tube & Stamping Co., Bridge-  
port, Ct.

Avery Stamping Co., Cleveland, O.

Bossert Electric Construction Co., Utica,  
N. Y.

Boston Pressed Metal Co., Worcester,  
Mass.

Bridgeport Hardware Mfg. Co., Bridge-  
port, Ct.

A. N. Clark & Son, Plainville, Ct.  
W. J. Clark Co., Salem, O.

Clark Novelty Co., Rochester, N. Y.  
Cleveland Stamping & Tool Co., Cleve-  
land, O.

Crosby Co., Buffalo, N. Y.  
Albert B. Curtis, Worcester, Mass.

Eastern Machine & Stamping Co., Provi-  
dence, R. I.

A. Garrison Foundry Co., Pittsburgh, Pa.  
Gem Mfg. Co., Boston, Mass.

Gem Mfg. Co., Pittsburgh, Pa.  
Geuser, Faeschke & Frey Co., Milwaukee,  
Wis.

Globe Machine & Stamping Co., Cleve-  
land, O.

Goodwin & Kintz Co., Winsted, Ct.  
Hanson Bros., Plainville, Ct.

Ideal Switch Co., Plainville, Ct.  
R. C. Jenkinson & Co., Newark, N. J.

John R. Keim Mills, Inc., Buffalo, N. Y.  
E. Konigslow Stamping & Tool Works,  
Cleveland, O.

Otto Konigslow Mfg. Co., Cleveland, O.  
Homer F. Livermore, Boston, Mass.

David Lupton's Sons Co., Westmoreland  
and Janney Sta., Pa.

Mathews Mfg. Co., Worcester, Mass.  
H. A. Matthews Mfg. Co., Seymour, Ct.

Frank Mossberg Co., Attleboro, Mass.  
Mossberg Wrench Co., Central Falls, R. I.

Northwestern Consolidated Iron & Steel  
Mfg. Co., Burlington, Ia.

John L. Parker Co., Worcester, Mass.  
Parker Wire Goods Co., Worcester, Mass.

Arthur T. Rutter & Co., 256 B'way, N. Y.  
Wm. B. Scaife & Sons Co., Pittsburgh.

Schatz Mfg. Co., Chappaqua, N. Y.  
J. H. Sessions & Son, Bristol, Ct.

M. I. Smith, Bristol, Ct.  
Geo. A. Smith Co., Worcester, Mass.

W. H. Stearns Stamping Co., Worcester,  
Mass.

Turner Brass Works, Sycamore, Ill.  
W. & S. Mfg. Co., Worcester, Mass.

Waterbury Brass Co., Waterbury, Ct.  
Worcester Pressed Steel Co., Worcester,  
Mass.

Worcester Stamping Co., Worcester, Mass.  
Wrought Washer Mfg. Co., Milwaukee,

Zeh & Hahnemann Co., Newark, N. J.

**Stampings, Bicycle-**  
(See Bicycle Parts.)

**Stampings, Brass-**

New York Washer & Gasket Co., Brook-  
lyn, N. Y.

U. S. Indestructible Gasket Co., 50  
Church St., New York.



**Stamps and Dies for Sheet Metal—**

E. W. Bliss Co., Brooklyn, N. Y.

**Stamps and Dies, Steel—**

Adriance Machine Works, Brooklyn, N. Y.

Blake &amp; Johnson Co., Waterbury, Ct.

E. W. Bliss Co., Brooklyn, N. Y.

Consolidated Press &amp; Tool Co., Hastings, Mich.

Eastern Machine &amp; Stamping Co., Providence, R. I.

Ferracute Machine Co., Bridgeton, N. J.

Globe Machine &amp; Stamping Co., Cleveland, O.

Hilles &amp; Jones Co., Wilmington, Del.

E. Konigsloew Stamping &amp; Tool Works, Cleveland, O.

Otto Konigsloew Mfg. Co., Cleveland, O.

Chas. Leffler &amp; Co., Brooklyn, N. Y.

Frank Mossberg Co., Attleboro, Mass.

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Niagara Machine &amp; Tool Works, Buffalo, N. Y.

Richard Mfg. Co., Bloomsburg, Pa.

Schatz Mfg. Co., Chappaqua, N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

M. I. Smith, Bristol, Ct.

Geo. A. Smith Co., Worcester, Mass.

V. &amp; O. Press Co., Brooklyn, N. Y.

W. &amp; S. Mfg. Co., Worcester, Mass.

Zeh &amp; Hahnemann Co., Newark, N. J.

(See also Dies.)

**Stamps, Brass—**

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

**Stamps, Dating—**

American Railway Supply Co., 24 Park Place, New York.

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

R. Woodman Mfg. &amp; Supply Co., Boston.

**Stamps, Rubber—**

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

**Stamps, Self Inking—**

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

**Stamps, Steel—**

(See Stamps and Dies, Steel.)

**Stamps, Steel Name—**

A. G. Butler, 234-236 Pearl St., N. Y.

E. Konigsloew Stamping &amp; Tool Works, Cleveland, O.

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

**Stamps, Time—**

Riggs &amp; Bro., 310 Market St., Philadelphia, Pa.

Schwerdtle Stamp Co., Bridgeport, Ct.

**Stanchions, Cattle—**

Louden Machinery Co., Fairfield, Ia.

Warsaw Elevator Co., Warsaw, N. Y.

**Stanchions, Hand Rope—**

W. &amp; J. Tiebout, 118 Chambers St., N. Y.

**Standards and Sockets, Canopy Top—**

E. D. Clapp Mfg. Co., Auburn, N. Y.

**Standpipes, Steel—**

American Bridge Co. of New York, 30 Church St., New York.

S. Freeman &amp; Sons Mfg. Co., Racine, Wis.

E. Keeler Co., Williamsport, Pa.

Meehan Boiler &amp; Construction Co., Lowellville, O.

R. Munroe &amp; Sons Mfg. Corporation, Pittsburgh, Pa.

Petroleum Iron Works Co., Sharon, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Wm. B. Scaife &amp; Sons Co., Pittsburgh.

Sheffield Car Co., Three Rivers, Mich.

Tudor Boiler Mfg. Co., Cincinnati, O.

R. D. Wood &amp; Co., 400 Chestnut St., Philadelphia, Pa.

**Stands and Holders, Bicycle—**

F. E. Myers &amp; Bro., Ashland, O.

**Stands and Lasts—**

(See Lasts and Stands, Shoe.)

**Stands and Racks, Ginger Ale—**

New York Stamping Co., Brooklyn, N. Y.

Wire Goods Co., Worcester, Mass.

**Stands, Axe and Scythe—**

J. D. Warren Mfg. Co., Chicago, Ill.

**Stands, Coffee and Tea Pot, Wire—**

(See Household Articles, Wire.)

**Stands, Coffee Pot—**

Columbia Grey Iron Co., Columbia, Pa.

**Stands, Display—**

Dufur &amp; Co., Baltimore, Md.

**Stands, Emery Wheel and Polishing—**

Luther Bros. Co., Milwaukee, Wis.

Royersford Foundry &amp; Machine Co., Royersford, Pa.

**Stands, Fire Arms—**

Wrightsville Hardware Co., Wrightsville, Pa.

**Stands, Floor—**

H. W. Caldwell &amp; Son Co., Western Ave. and 17th St., Chicago, Ill.

Geo. V. Cresson Co., 18th St. and Allegheny Ave., Philadelphia, Pa.

Dodge Mfg. Co., Mishawaka, Ind.

Falls Rivet &amp; Machine Co., Cuyahoga Falls, O.

Jones &amp; Laughlin Steel Co., Pittsburgh.

Lunkenheimer Co., Cincinnati, O.

**Stands, Flower Pot—**

Andrews Wire &amp; Iron Works, Rockford, Ill.

Buffalo Wire Works Co., Buffalo, N. Y.

Edward Darby &amp; Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur &amp; Co., Baltimore, Md.

Estey Wire Works Co., 59 Fulton St., N. Y.

Gilbert &amp; Bennett Mfg. Co., 27 Broadway, New York.

Ludlow-Saylor Wire Co., St. Louis, Mo.

Fred J. Meyers Mfg. Co., Hamilton, O.

Nimmo Fence &amp; Wire Works Co., Norwood, O.

**Stands, Gas Pipe—**

Loew Mfg. Co., Cleveland, O.

**Stands, Jardiniere—**

Andrews Wire &amp; Iron Works, Rockford, Ill.

Fred J. Meyers Mfg. Co., Hamilton, O.

**Stands, Micrometer—**

L. S. Starrett Co., Athol Mass.

**Stands, Mule Pulley—**

H. W. Caldwell &amp; Son Co., Western Ave. and 17th St., Chicago, Ill.

Falls Rivet &amp; Machine Co., Cuyahoga Falls, O.

Jones & Laughlin Steel Co., Pittsburgh.  
Poole Engineering & Machine Co., Balti-  
more, Md.

**Stands, Plant—**

(See Stands, Flower Pot.)

**Stands, Sad Iron—**

Columbia Grey Iron Co., Columbia, Pa.  
Youngstown Iron & Steel Roofing Co.,  
Youngstown, O.

**Stands, Shoe Display—**

Standard Wire Co., New Castle, Pa.

**Stands, Shoe Polishing—**

Turner Brass Works, Sycamore, Ill.

**Stands, Tool, Portable—**

Western Tool & Mfg. Co., Springfield, O.

**Stands, Umbrella—**

Andrews Wire & Iron Works, Rockford,  
Ill.

Bethlehem Foundry & Machine Co., So.  
Bethlehem, Pa.

Buffalo Wire Works Co., Buffalo, N. Y.

W. J. Clark Co., Salem, O.

Edward Darby & Sons, 233-235 Arch St.,  
Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

Estey Wire Works Co., 57 Fulton St.,  
N. Y.

Goodwin & Kintz Co., Winsted, Ct.

Ludlow-Saylor Wire Co., St. Louis, Mo.

Fred J. Meyers Mfg. Co., Hamilton, O.

**Stands, Valve Floor—**

Kennedy Valve Mfg. Co., 57 Beekman St.,  
New York.

**Stands, Vice, Portable—**

New Britain Machine Co., New Britain,  
Ct.

Western Tool & Mfg. Co., Springfield, O.

**Stands, Wash—**

Fred J. Meyers Mfg. Co., Hamilton, O.

**Staple Drivers—**

(See Drivers, Staple.)

**Staple Machinery—**

Baird Machine Co., Oakville, Ct.

Blake & Johnson Co., Waterbury, Ct.

Humphreys & Sons, Joliet, Ill.

E. J. Manville Machine Co., Waterbury,  
Ct.

F. B. Shuster Co., New Haven, Ct.

**Staple Pullers—**

(See Pullers, Staple.)

**Staples—**

(See Wrought Iron Goods; also Staples,  
Galvanized.)

**Staples and Loops, Furni-  
ture—**

Grand Crossing Tack Co., Grand Cross-  
ing, Ill.

E. H. Titchener & Co., Binghamton,  
N. Y.

**Staples, Basket—**

(See Staples, Clamp.)

**Staples, Bed Spring—**

Tower Mfg. Co., Cincinnati, O.

**Staples, Blind—**

E. H. Titchener & Co., Binghamton, N. Y.

Tower Mfg. Co., Cincinnati, O.

Wire Goods Co., Worcester, Mass.

**Staples, Broom—**

Tower Mfg. Co., Cincinnati, O.

**Staples, Clamp—**

Tower Mfg. Co., Cincinnati, O.

**Staples, Cooperage—**

E. H. Titchener & Co., Binghamton, N. Y.

Tower Mfg. Co., Cincinnati, O.

C. E. & E. P. Townsend Co., New Brigh-  
ton, Pa.

Wire Goods Co., Worcester, Mass.

**Staples, Electricians—**

Tower Mfg. Co., Cincinnati, O.

**Staples, Galvanized or Pol-  
ished—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Keystone Steel & Wire Co., Peoria, Ill.

**Staples, Nutted—**

Upson Nut Co., Cleveland, O.

**Staples, Wagon Box—**

Oliver Iron & Steel Co., Pittsburgh, Pa.

**Staples, Wire—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Clinton Wire Cloth Co., Clinton, Mass.

Cobb & Drew, Inc., Plymouth, Mass.

Edward Darby & Sons, 233-235 Arch St.,  
Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

W. D. Gibson Co., Huron and Kingsbury

Sts., Chicago, Ill.

Gilbert & Bennett Mfg. Co., 277 Broad-  
way, New York.

Grand Crossing Tack Co., Grand Cross-  
ing, Ill.

Griswold Co., Sterling, Ill.

Milwaukee Tack Co., Milwaukee, Wis.

Morgan Spring Co., Worcester, Mass.

Parker Wire Goods Co., Worcester, Mass.

Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.

Pittsburgh Steel Co., Pittsburgh, Pa.

Spencer Wire Co., Worcester, Mass.

E. H. Titchener & Co., Binghamton, N. Y.

Wickwire Bros., Cortland, N. Y.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Staples, Wire Cloth—**

Tower Mfg. Co., Cincinnati, O.

**Starters, Bung—**

Boston & Lockport Block Co., East Bos-  
ton, Mass.

Piqua Handle & Mfg. Co., Piqua, O.

John Sommer Faucet Co., Newark, N. J.

**Starters, Car—**

(See Pushers, Car.)

**Station House Cages—**

(See Jails, Jail Cells, &c.)

**Stationers' Hardware (Ink-  
stands, Clips, Pin Cushions,  
Pen Racks, and Trays,  
Erasers, &c.)—**

Blake & Johnson Co., Waterbury, Ct.

Bridgeport Hardware Mfg. Co., Bridge-  
port, Ct.

Goodwin & Kintz Co., Winsted, Ct.

Landers, Frary & Clark, New Britain, Ct.

Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.

Reading Hardware Co., Reading, Pa.

Susquehanna Casting Co., Wrightsville,  
Pa.

United States Clothes Pin Co., Montpe-  
lier, Vt.

**Stationers' Wire Goods.**

**Desk Baskets, &c.—**

(See Baskets, Letter, Wire.)

**Statuary, Lawn—**

Stewart Iron Works Co., Cincinnati, O.

**Stave Knives—**

(See Knives, Machine.)

**Stave Sawing and Finishing Machinery—**

Peter Gerlach Co., Cleveland, O.

**Stay Bolt Cutters, Rollers—**

(See Cutters, Rollers.)

**Stay Bolt Iron—**

(See Iron, Rivet and Stay Bolt.)

**Stay Bolts, Roller—**

(See Bolts, Roller Stay.)

**Stay Rollers—**

(See Rollers, Stay.)

**Stays and Clips, Fence—**

Nimmo Fence &amp; Wire Works Co., Norwood, O.

**Stays, Bicycle—**

(See Bicycle Parts.)

**Stays, Door, Non-Sag—**

Richards Mfg. Co., Aurora, Ill.

**Stays, Transom—**

Yale &amp; Towne Mfg. Co., 9 Murray St., New York.

**Stays, Trunk Lid—**R. C. Jenkinson & Co., Newark, N. J.  
J. H. Sessions & Son, Bristol, Ct.**Steak Pounders—**

(See Pounders, Steak.)

**Steam Fitters' Supplies—**Humphreys Mfg. Co., Mansfield, O.  
Lunkenheimer Co., Cincinnati, O.  
John H. McGowan Co., Cincinnati, O.  
Chas. Millar & Son Co., Utica, N. Y.**Steamers, Thawing—**

Turner Brass Works, Sycamore, Ill.

**Steel, Acid Open Hearth—**Andrews Steel Co., Newport, Ky.  
Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.**Steel, Agricultural—**Inland Steel Co., First National Bank Bldg., Chicago, Ill.  
Interstate Iron & Steel Co., First National Bank Bldg., Chicago, Ill.**Steel, Automobile Frame—**Bethlehem Steel Co., So. Bethlehem, Pa.  
Thomas Prosser & Son, 26 Platt St., N.Y.  
Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.**Steel, Automobile Spring—**Thomas Prosser & Son, 26 Platt St., N.Y.  
Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.**Steel, Axe—**Colonial Steel Co., Pittsburgh, Pa.  
Farist Steel Co., Bridgeport, Ct.  
Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.**Steel Balls, Bars, &c.—**

(See Balls, Bars, &amp;c.)

**Steel, Band Saw—**American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Henry Disston & Sons, Philadelphia, Pa.  
J. Wilckes Co., 135 William St., N. Y.**Steel Bars, Boiler Staybolt—**

Falls Hollow Staybolt Co., Cuyahoga Falls, O.

**Highland Iron & Steel Co., Terre Haute, Ind.****Steel, Basic Open Hearth—**Andrews Steel Co., Newport, Ky.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
La Belle Iron Works, Steubenville, O.  
Alan Wood Iron & Steel Co., 519 Arch St., Philadelphia, Pa.**Steel Brokers and Merchants—**

(See Iron and Steel Brokers and Merchants.)

**Steel, Chrome—**Chrome Steel Works, Chrome, N. J.  
Colonial Steel Co., Pittsburgh, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.**Steel, Chrome, Nickel—**Bethlehem Steel Co., So. Bethlehem, Pa.  
Farist Steel Co., Bridgeport, Ct.  
William Jessop & Sons, Ltd., 91 John St., New York.

Thomas Prosser &amp; Son, 26 Platt St., N. Y.

**Steel Clamps—**

(See Clamps, Steel.)

**Steel, Clock Spring—**Cary Spring Works, 240-242 W. 29th St., N. Y.  
S. & C. Wardlow, 278 Pearl St., N. Y.  
J. Wilckes Co., 135 William St., N. Y.**Steel, Cold Drawn Shapes—**Henry Disston & Sons, Philadelphia, Pa.  
John R. Keim Mills, Inc., Buffalo, N. Y.  
Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.C. Pardee Works, Perth Amboy, N. J.  
Worcester Pressed Steel Co., Worcester, Mass.**MERCHANTS.**Arthur C. Harvey, Boston, Mass.  
Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.  
Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.  
Charles G. Stevens Co., 60 S. Canal St., Chicago, Ill.  
Edgar T. Ward & Sons, Boston, Mass.**Steel, Cold Rolled—**American Tube & Stamping Co., Bridgeport, Ct.  
Cary Spring Works, 240-242 W. 29th St., New York.Columbia Steel Co., Ellyria, O.  
Henry Disston & Sons, Philadelphia, Pa.  
Empire Iron & Steel Co., Niles, O.  
Highland Iron & Steel Co., Terre Haute, Ind.

Wm. Jessop &amp; Sons, Ltd., 91 John St., New York.

Jones & Laughlin Steel Co., Pittsburgh.  
Miller & Van Winkle, Brooklyn, N. Y.  
Morris & Bailey Steel Co., Pittsburgh, Pa.  
Pennsylvania Shafting Co., Spring City, Pa.Republic Iron & Steel Co., Pittsburgh, Pa.  
Superior Steel Co., Carnegie, Pa.  
S. & C. Wardlow, 278 Pearl St., N. Y.  
Washburn Wire Co., Philadelphia, Pa.  
West Leechburg Steel Co., Pittsburgh, Pa.  
J. Wilckes Co., 135 William St., N. Y.  
Worcester Pressed Steel Co., Worcester, Mass.**MERCHANTS.**Bourne-Fuller Co., Cleveland, O.  
Denman & Davis, 85-91 Lafayette St., New York.  
Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.  
Arthur C. Harvey Co., Boston, Mass.  
Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.  
Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.

**Patriarche & Bell**, 215 Pearl St., N. Y.  
**Horace T. Potts & Co.**, 316-320 N. Third St., Philadelphia, Pa.  
**Joseph T. Ryerson & Son**, 18-22 Milwaukee Ave., Chicago, Ill.  
**Scully Steel & Iron Co.**, 69 N. Halsted St., Chicago, Ill.  
**Charles G. Stevens Co.**, 60 So. Canal St., Chicago, Ill.  
**Edgar T. Ward & Sons**, Boston, Mass.  
**Wheelock, Lovejoy & Co.**, 23 Cliff St., New York.

**Steel, Cold Rolled, Deep**

**Drawing—**  
**American Tube & Stamping Co.**, Bridgeport, Ct.

**Columbia Steel Co.**, Elyria, O.  
**Empire Iron & Steel Co.**, Niles, O.  
**Morris & Bailey Steel Co.**, Pittsburgh, Pa.  
**J. Wilkes Co.**, 135 William St., N. Y.

**Steel, Cold Rolled Sheet,**

**Hot Rolled Sheet—**  
 (See Sheet Steel.)

**Steel, Cold Rolled Spring—**

**Columbia Steel Co.**, Elyria, O.  
**Morris & Bailey Steel Co.**, Pittsburgh, Pa.

**Steel, Cold Rolled Strip—**

**American Tube & Stamping Co.**, Bridgeport, Ct.

**Columbia Steel Co.**, Elyria, O.  
**Henry Disston & Sons**, Philadelphia, Pa.  
**Griffin Mfg. Co.**, Erie, Pa.  
**Miller & Van Winkle**, Brooklyn, N. Y.  
**Morris & Bailey Steel Co.**, Pittsburgh, Pa.  
**Stanley Works**, New Britain, Ct.  
**Superior Steel Co.**, Carnegie, Pa.  
**S. & C. Wardlow**, 278 Pearl St., N. Y.  
**West Leechburg Steel Co.**, Pittsburgh, Pa.  
**Worcester Pressed Steel Co.**, Worcester, Mass.

**MERCHANTS.**

**Hermann Boker & Co.**, 101-103 Duane St., New York.  
**Bourne-Fuller Co.**, Cleveland, O.  
**Denman & Davis**, 85-91 Lafayette St., New York.  
**Dilworth, Gilbert & Towne, Inc.**, 35-37 Wooster St., New York.  
**Arthur C. Harvey Co.**, Boston, Mass.  
**Cal. Hirsch & Sons**, Iron & Rail Co., St. Louis, Mo.  
**Harold McCalla**, 444 Fairmount Ave., Philadelphia, Pa.  
**Geo. Nash Co.**, 115 Washington Boulevard, Chicago, Ill.  
**Horace T. Potts & Co.**, 316-320 N. Third St., Philadelphia, Pa.  
**Joseph T. Ryerson & Son**, Chicago, Ill.  
**Scully Steel & Iron Co.**, 69 N. Halsted St., Chicago, Ill.  
**Charles G. Stevens Co.**, 58-60 S. Canal St., Chicago, Ill.  
**Edgar T. Ward & Sons**, Boston, Mass.  
**Wheelock, Lovejoy & Co.**, 23 Cliff St., New York.

**Steel, Corset—**

**American Steel & Wire Co.**, Commercial National Bank Bldg., Chicago, Ill.  
**American Tube & Stamping Co.**, Bridgeport, Ct.  
**Cary Spring Works**, 240-242 W. 29th St., New York.

**Steel, Crucible Cast—**

**Bancroft & Co.**, Philadelphia, Pa.  
**Philadelphia, Pa.**

**Chrome Steel Works**, Chrome, N. J.  
**Colonial Steel Co.**, Pittsburgh, Pa.  
**Henry Disston & Sons**, Philadelphia, Pa.  
**Farist Steel Co.**, Bridgeport, Ct.  
**Hobson, Houghton & Co., Ltd.**, 21 Cliff St., New York.  
**Wm. Jessop & Sons, Ltd.**, 91 John St., New York.  
**Kidd Bros. & Burgher Steel Wire Co.**, Aliquippa, Pa.  
**Lebanon Steel Casting Co.**, Lebanon, Pa.  
**Samuel Osborn & Co.**, Boston, Mass.  
**Thos. Prosser & Son**, 26 Platt St., N. Y.  
**Vulcan Crucible Steel Co.**, of Pittsburgh, Aliquippa, Pa.  
**S. & C. Wardlow**, 278 Pearl St., N. Y.

**MERCHANTS.**

**Hermann Boker & Co.**, 101-103 Duane St., New York.  
**Bourne-Fuller Co.**, Cleveland, O.  
**Denman & Davis**, 85-91 Lafayette St., New York.  
**Dilworth, Gilbert & Towne, Inc.**, 35-37 Wooster St., New York.  
**Arthur C. Harvey Co.**, Boston, Mass.  
**Geo. Nash Co.**, 115 Washington Boulevard, Chicago, Ill.  
**Patriarche & Bell**, 215 Pearl St., N. Y.  
**Horace T. Potts & Co.**, 316-320 N. Third St., Philadelphia, Pa.  
**Charles G. Stevens Co.**, 58-60 S. Canal St., Chicago, Ill.  
**Wheelock, Lovejoy & Co.**, 23 Cliff St., New York.

**Steel, Cutlery—**

**Henry Disston & Sons**, Philadelphia, Pa.  
**Farist Steel Co.**, Bridgeport, Ct.  
**Vulcan Crucible Steel Co.**, of Pittsburgh, Aliquippa, Pa.  
**S. & C. Wardlow**, 278 Pearl St., N. Y.  
**J. Wilkes Co.**, 135 William St., N. Y.

**Steel, Die—**

**Colonial Steel Co.**, Pittsburgh, Pa.  
**Henry Disston & Sons**, Philadelphia, Pa.  
**Farist Steel Co.**, Bridgeport, Ct.  
**Wm. Jessop & Sons, Ltd.**, 91 John St., New York.  
**Kidd Bros. & Burgher Steel Wire Co.**, Aliquippa, Pa.  
**Pittsburgh Tool Steel Wire Co.**, Monaca, Pa.  
**Thos. Prosser & Son**, 26 Platt St., N. Y.  
**Vulcan Crucible Steel Co.**, of Pittsburgh, Aliquippa, Pa.  
**S. & C. Wardlow**, 278 Pearl St., N. Y.

**MERCHANTS.**

**Bourne-Fuller Co.**, Cleveland, O.  
**Denman & Davis**, 85-91 Lafayette St., New York.  
**Arthur C. Harvey Co.**, Boston, Mass.  
**Geo. Nash Co.**, 115 Washington Boulevard, Chicago, Ill.  
**Patriarche & Bell**, 215 Pearl St., N. Y.  
**Horace T. Potts & Co.**, 316-320 N. Third St., Philadelphia, Pa.  
**Joseph T. Ryerson & Son**, 18-22 Milwaukee Ave., Chicago, Ill.  
**Scully Steel & Iron Co.**, 69 N. Halsted St., Chicago, Ill.  
**Charles G. Stevens Co.**, 58-60 S. Canal St., Chicago, Ill.  
**Edgar T. Ward & Sons**, Boston, Mass.

**Steel, Double Shear—**

**Colonial Steel Co.**, Pittsburgh, Pa.

Wm. Jessop & Sons, Ltd., 91 John St., New York.

S. & C. Wardlow, 278 Pearl St., N. Y.

### Steel. File—

Bethlehem Steel Co., So. Bethlehem, Pa.

Farist Steel Co., Bridgeport, Ct.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.

S. & C. Wardlow, 278 Pearl St., N. Y.

### Steel File Cases—

(See Cases, Document and File.)

### Steel Fishing Rods—

(See Rods, Fishing, Steel.)

### Steel Goods Brackets—

(See Brackets, Shovel, Hoe, Rake, Fork, &c.)

### Steel Goods Racks—

(See Racks, Steel Goods.)

### Steel Gun Barrel—

Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.

### Steel Hammer—

Braeburn Steel Co., Braeburn, Pa.

Colonial Steel Co., Pittsburgh, Pa.

Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.

### Steel High Speed—

Bethlehem Steel Co., So. Bethlehem, Pa.

Cammell, Laird & Co., Ltd., 132-B Front St., New York.

Colonial Steel Co., Pittsburgh, Pa.

Hobson, Houghton & Co., Ltd., 21 Cliff St., New York.

Wm. Jessop & Sons, 91 John St., N. Y.

Samuel Osborn & Co., Boston, Mass.

Thos. Prosser & Son, 26 Platt St., N. Y.

Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.

S. & C. Wardlow, 278 Pearl St., N. Y.

A. P. Witteman & Co., 1223 Spring St., Philadelphia, Pa.

### MERCHANTS.

Denman & Davis, 85-91 Lafayette St., New York.

Dilworth, Gilbert & Towne, Inc., 35-37 Wooster St., New York.

Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.

F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

Horace T. Potts & Co., 316-320 N. Third St., Philadelphia, Pa.

Edgar T. Ward & Sons, Boston, Mass.

Wheelock, Lovejoy & Co., 23 Cliff St., New York.

### Steel Hot Rolled Strip—

American Tube & Stamping Co., Bridgeport, Ct.

Superior Steel Co., Carnegie, Pa.

West Leechburg Steel Co., Pittsburgh, Pa.

Wheelock, Lovejoy & Co., 23 Cliff St., New York.

Worcester Pressed Steel Co., Worcester, Mass.

### Steel Key—

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Pittsburgh Tool Steel Co., Monaca, Pa.

### Steel Machine Knife—

Colonial Steel Co., Pittsburgh, Pa.

Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.

& C. Wardlow, 278 Pearl St., N. Y.

### Steel Machinery—

Braeburn Steel Co., Braeburn, Pa.

Colonial Steel Co., Pittsburgh, Pa.

Henry Diston & Sons, Philadelphia, Pa.

Farist Steel Co., Bridgeport, Ct.

Morgan Construction Co., Worcester, Mass.

Morgan Engineering Co., Alliance, O.

Thomas Prosser & Son, 26 Platt St., N. Y.

Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.

Wellman-Seaver-Morgan Co., Cleveland, O.

### MERCHANTS.

Bourne-Fuller Co., Cleveland, O.

Denman & Davis, 85-91 Lafayette St., New York.

Arthur C. Harvey Co., Boston, Mass.

Cal. Hirsch & Sons Iron & Rail Co., St. Louis, Mo.

Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.

Ogden & Wallace, 577 Greenwich St., N. Y.

Patriarche & Bell, 215 Pearl St., N. Y.

Horace T. Potts & Co., 316-320 N. Third St., Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.

Charles G. Stevens Co., 60 S. Canal St., Chicago, Ill.

### Steel Magnet—

Farist Steel Co., Bridgeport, Ct.

Thomas Prosser & Son, 26 Platt St., N. Y.

Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.

### Steel Manganese—

Taylor Iron & Steel Co., High Bridge, N. J.

### Steel Merchant—

Bethlehem Steel Co., So. Bethlehem, Pa.

Farist Steel Co., Bridgeport, Ct.

La Belle Iron Works, Steubenville, O.

### MERCHANTS.

Harold McCulla, 44 Fairmount Ave., Philadelphia, Pa.

### Steel Mushet's Special—

Samuel Osborn & Co., Boston, Mass.

### Steel Nickel—

Bethlehem Steel Co., So. Bethlehem, Pa.

Farist Steel Co., Bridgeport, Ct.

Wm. Jessop & Sons, Ltd., 91 John St., N. Y.

Mesta Machine Co., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

### Steel Pen—

Wm. Jessop & Sons, 91 John St., N. Y.

Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.

S. & C. Wardlow, 278 Pearl St., N. Y.

J. Wilkes Co., 135 William St., N. Y.

### Steel Pivot—

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

### Steel Plants, Open Hearth—

Morgan Construction Co., Worcester, Mass.

Wellman-Seaver-Morgan Co., Cleveland, O.

### Steel Plow—

Colonial Steel Co., Pittsburgh, Pa.

### Steel Plow, Soft Center—

Bourne-Fuller Co., Cleveland, O.

Colonial Steel Co., Pittsburgh, Pa.

### MERCHANTS.

Hermann Boker & Co., 101-103 Duane St., New York.

**Steel, Polished Hack Saw Frame—**  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.

**Steel Products—**  
(See Shapes, Pressed Steel.)

**Steel, Reinforcing—**  
Buell & Mitchell, 120 Liberty St., N. Y.  
Inland Steel Co., First National Bank  
Bldg., Chicago, Ill.  
Interstate Iron & Steel Co., First Na-  
tional Bank Bldg., Chicago, Ill.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.  
Republic Iron & Steel Co., Pittsburgh,  
Pa.

**Steel, Rock Drill—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Braeburn Steel Co., Braeburn, Pa.  
Colonial Steel Co., Pittsburgh, Pa.  
Farist Steel Co., Bridgeport, Ct.  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.  
Vulcan Crucible Steel Co. of Pittsburgh,  
Aliquippa, Pa.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.  
Patriarche & Bell, 215 Pearl St., N. Y.  
Horace T. Potts & Co., 316-320 N. Third  
St., Philadelphia, Pa.  
Joseph T. Ryerson & Son, 18-22 Milwaukee  
Ave., Chicago, Ill.  
Scully Steel & Iron Co., 69 N. Halsted  
St., Chicago, Ill.  
Wheelock, Lovejoy & Co., 23 Cliff St., N. Y.  
**Steel, Roller Bearing—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Colonial Steel Co., Pittsburgh, Pa.  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.  
Pittsburgh Tool Steel Wire Co., Monaca,  
Pa.

**Steel Rolls, Hardened, Forged—**  
(See Rolls, Hardened, Forged Steel.)

**Steel, Saw—**  
Colonial Steel Co., Pittsburgh, Pa.  
Henry Disston & Sons, Philadelphia, Pa.  
Hobson, Houghton & Co., Ltd., 21 Cliff  
St., New York.  
Wm. Jessop & Sons, Ltd., 91 John St.,  
New York.  
Geo. Nash Co., 115 Washington Boul-  
vard, Chicago, Ill.  
Vulcan Crucible Steel Co. of Pittsburgh,  
Aliquippa, Pa.  
S. & O. Wardlow, 278 Pearl St., N. Y.  
J. Wilckes Co., 135 William St., N. Y.

**Steel, Screw, in Round, Square, &c.—**  
Pittsburgh Tool Steel Wire Co., Monaca,  
Pa.

**Steel, Self Hardening—**  
Armstrong Bros. Tool Co., 109 N. Fran-  
cisco Ave., Chicago, Ill.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Heller Bros. Co., Newark, N. J.  
Hobson, Houghton & Co., Ltd., 21 Cliff  
St., New York.  
Wm. Jessop & Sons, 91 John St., N. Y.  
Samuel Osborn & Co., Boston, Mass.

Thos. Prosser & Son, 26 Platt St., N. Y.  
Charles G. Stevens Co., 60 So. Canal St.,  
Chicago, Ill.

**MERCHANTS.**

Bourne-Fuller Co., Cleveland, O.  
Denman & Davis, 85-91 Lafayette St.,  
New York.  
Dilworth, Gilbert & Towne, Inc., 35-37  
Wooster St., New York.  
Arthur C. Harvey Co., Boston, Mass.  
Geo. Nash Co., 115 Washington Boul-  
vard, Chicago, Ill.  
Wm. S. Nicholls, 251 Broadway, N. Y.  
Patriarche & Bell, 215 Pearl St., N. Y.  
Horace T. Potts & Co., 316-320 N. Third  
St., Philadelphia, Pa.  
Scully Steel & Iron Co., 69 N. Halsted  
St., Chicago, Ill.  
Edgar T. Ward & Sons, Boston, Mass.

**Steel Shavings—**  
(See Shavings, Steel.)

**Steel Sheets Punched to Order—**  
Harrington & King Perforating Co., 224  
N. Union St., Chicago, Ill.  
Hendrick Mfg. Co., Carbondale, Pa.  
Chas. Mundt & Sons, 441 Pearl St., N. Y.

**Steel Shelving—**  
(See Shelves and Shelving, Library,  
Factory, &c.)

**Steel, Shovel—**  
Colonial Steel Co., Pittsburgh, Pa.  
La Belle Iron Works, Steubenville, O.

**Steel, Show Card—**  
American Sheet and Tin Plate Co., Pitts-  
burgh, Pa.

**Steel, Spring—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Colonial Steel Co., Pittsburgh, Pa.  
Farist Steel Co., Bridgeport, Ct.  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.  
Patriarche & Bell, 215 Pearl St., N. Y.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Vulcan Crucible Steel Co. of Pittsburgh,  
Aliquippa, Pa.  
J. Wilckes Co., 135 William St., N. Y.

**Steel, Stamping Special—**  
La Belle Iron Works, Steubenville, O.  
Superior Steel Co., Carnegie, Pa.  
J. Wilckes Co., 135 William St., N. Y.  
Youngstown Iron & Steel Roofing Co.,  
Youngstown, O.

**Steel, Swedish—**  
(See Iron and Steel, Swedish.)

**Steel, Tap, Drawn—**  
Pittsburgh Tool Steel Wire Co., Monaca,  
Pa.

**Steel, Tape Line—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Keuffel & Esser Co., 127 Fulton St., N. Y.  
J. Wilckes Co., 135 William St., N. Y.

**Steel, Tire—**  
Carnegie Steel Co., Pittsburgh, Pa.

**Steel, Tool—**  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Braeburn Steel Co., Braeburn, Pa.  
Colonial Steel Co., Pittsburgh, Pa.  
Henry Disston & Sons, Philadelphia, Pa.  
Farist Steel Co., Bridgeport, Ct.  
Heller Bros. Co., Newark, N. J.  
Hobson, Houghton & Co., Ltd., 21 Cliff  
St., New York.

Wm. Jessop & Sons, 91 John St., N. Y.  
 Kidd Bros. & Burgher Steel Wire Co.,  
 Aliquippa, Pa.  
 Samuel Osborn & Co., Boston, Mass.  
 Pittsburgh Tool Steel Wire Co., Monaca,  
 Pa.  
 Thos. Prosser & Son, 26 Platt St., N. Y.  
 Vulcan Crucible Steel Co. of Pittsburgh,  
 Aliquippa, Pa.  
 S. & C. Wardlow, 278 Pearl St., N. Y.  
 J. Wilkes Co., 135 William St., N. Y.

#### MERCHANTS.

Hermann Boker & Co., 101-103 Duane St.,  
 New York.  
 Bournie-Fuller Co., Cleveland, O.  
 Denman & Davis, 85-91 Lafayette St.,  
 New York.  
 Arthur C. Harvey Co., Boston, Mass.  
 Cal. Hirsch & Sons Iron & Rail Co.,  
 St. Louis, Mo.  
 Geo. Nash Co., 115 Washington Boule-  
 vard, Chicago, Ill.  
 Wm. S. Nicholls, 251 Broadway, N. Y.  
 Ogden & Wallace, 577 Greenwich St., N. Y.  
 Patriarche & Bell, 215 Pearl St., N. Y.  
 F. R. Phillips & Sons Co., Pennsylvania  
 Bldg., Philadelphia, Pa.  
 Horace T. Potts & Co., 316-320 N. Third  
 St., Philadelphia, Pa.  
 Joseph T. Ryerson & Son, 18 Milwaukee  
 Ave., Chicago, Ill.  
 Scully Steel & Iron Co., Halsted and  
 Wayman Sts., Chicago, Ill.  
 Charles G. Stevens Co., 60 So. Canal St.,  
 Chicago, Ill.  
 Edgar T. Ward & Sons, Boston, Mass.  
 Wheelock, Lovejoy & Co., 23 Cliff St.,  
 New York.  
 A. P. Witterman & Co., 1223 Spring St.,  
 Philadelphia, Pa.

**Steel, Twist Drill Drawn—**  
 Pittsburgh Tool Steel Wire Co., Monaca,  
 Pa.

**Steel, Vanadium—**  
 Colonial Steel Co., Pittsburgh, Pa.  
 Mesta Machine Co., Pittsburgh, Pa.

**Steel, Watch Spring—**  
 Cary Spring Works, 240-242 W. 29th St.,  
 New York.

Kidd Bros. & Burgher Steel Wire Co.,  
 Aliquippa, Pa.

Miller & Van Winkle, Brooklyn, N. Y.  
 Geo. Nash Co., 115 Washington Boule-  
 vard, Chicago, Ill.

Pittsburgh Tool Steel Wire Co., Monaca,  
 Pa.

S. & C. Wardlow, 278 Pearl St., N. Y.  
 J. Wilkes Co., 135 William St., N. Y.

**Steel, Welded, Chrome Steel**  
**and Iron—**

Chrome Steel Works, Chrome, N. J.

**Steel Welding—**  
 (See Welding, Iron and Steel, Electric  
 and Thermit Processes.)

**Steel Wire—**  
 American Steel & Wire Co., Commercial  
 National Bank Bldg., Chicago, Ill.

**Steel Wire Brushes—**  
 (See Brushes, Steel Wire.)

**Steel Wire, Cast—**  
 (See Wire, Cast Steel.)

**Steel Works Machinery—**  
 (See Rolling Mill Machinery.)

**Steels, Buffer and Scraper—**  
 Tuck Mfg. Co., Brockton, Mass.

**Steels, Butcher, &c.—**

American Cutlery Co., Chicago, Ill.

John Chatillon & Sons, 85 Cliff St., N. Y.

Claude Shear Co., Fremont, O.

Columbian Cutlery Co., Reading, Pa.

Goodell Co., Antrim, N. H.

Landers, Frary & Clark, New Britain, Ct.

John Wilson, Sheffield, England.

**Steelyards—**

Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.

**Steering Gears—**

Cambria Forge Co., Johnstown, Pa.

**Steering Gears, Steam—**

Pawling & Harnischfeger, Milwaukee.

**Stems, Valve—**

Bethlehem Steel Co., So. Bethlehem, Pa.

Phosphor-Bronze Smelting Co., Ltd., 2200

Washington Ave., Philadelphia, Pa.

Thomas Prosser & Son, 26 Platt St., N. Y.

**Stencils—**

Geo. M. Ness, Jr., 61 Fulton St., N. Y.

Schwerdtle Stamp Co., Bridgeport, Ct.

**Stenness, Kraut, Cedar—**

Richmond Cedar Works, Richmond, Va.

**Step Ladder Joints—**

(See Joints, Step Ladder.)

**Step Ladders—**

(See Ladders, Step.)

**Step Plates, Brass—**

(See Plates, Brass, Step.)

**Steps, Pole—**

(See Telegraph and Telephone Pole Sup-  
 plices.)

**Stereotype Metal—**

Empire Metal Co., Syracuse, N. Y.

Theo. Hiertz Metal Co., St. Louis, Mo.

Merchant & Evans Co., Philadelphia, Pa.

Pittsburgh White Metal Co., Pittsburgh.

**Stereotyping—**

St. Louis Electrotpe Foundry, St. Louis.

**Sterilizers—**

Gem Mfg. Co., Boston, Mass.

Stuart & Peterson Co., Burlington, N. J.

**Sticks, Clothes—**

Wrightsville Hardware Co., Wrightsville, Pa.

**Sticks, Emery and Corun-  
 dum—**

American Emery Wheel Works, Provi-  
 dence, R. I.

**Sticks, Gambrel—**

Piqua Handle & Mfg. Co., Piqua, O.

**Sticks, Yard—**

(See Yard Sticks.)

**Stiffeners, Heel—**

Heath Foundry & Mfg. Co., Plymouth, O.

Holt-Lyon Co., Inc., Tarrytown, N. Y.

Louis Sacks, Newark, N. J.

**Stills—**

E. B. Badger & Sons Co., Boston, Mass.

Stuart & Peterson Co., Burlington, N. J.

**Stills, Alcohol—**

Tudor Boiler Mfg. Co., Cincinnati, O.

**Stills, Oil and Tar—**

Meehan Boiler & Construction Co., Low-  
 ellsville, O.

Petroleum Iron Works Co., Sharon, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

**Stirrers—**

Joseph Dixon Crucible Co., Jersey City.

International Acheson Graphite Co.,  
 Niagara Falls, N. Y.

**Stirrups, Machine—**  
Win. H. Haskell Mfg. Co., Pawtucket, R. I.

**Stirrups, Riding—**  
North & Judd Mfg. Co., New Britain, Ct.

**Stirrups, Timber—**  
(See Hangers and Stirrups.)

**Stock, Milk Can—**  
(See Milk Can Stock.)

**Stock Scales, Tank—**  
(See Scales, Tank.)

**Stock Waterers—**  
S. Cheney & Son, Manlius, N. Y.

**Stocks and Dies, Black-smiths'—**  
Butterfield & Co., Derby Line, Vt.  
J. M. Carpenter Tap & Die Co., Pawtucket, R. I.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Stocks, Taps and Dies—**  
Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.  
C. H. Bealy & Co., 15-21 S. Clinton St., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.  
Butterfield & Co., Derby Line, Vt.  
S. W. Card Mfg. Co., Mansfield, Mass.  
J. M. Carpenter Tap & Die Co., Pawtucket, R. I.

Champion Blower & Forge Co., Lancaster, Pa.

Curtis & Curtis Co., Bridgeport, Ct.  
Samuel Hall's Sons, 223-233 W. 10th St., New York.

Hardinge Bros., 1036 Lincoln Ave., Chicago, Ill.

Humphries Mfg. Co., Mansfield, O.  
Jarecki Mfg. Co., Erie, Pa.

J. M. King & Co., Watford, N. Y.  
Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Morse Twist Drill & Machine Co., New Bedford, Mass.

Niles-Bement-Pond Co., 111 Broadway, New York.

Pratt & Whitney Co., Hartford, Ct.  
Reed & Prince Mfg. Co., Worcester, Mass.

D. Saunders' Sons, Yonkers, N. Y.  
Standard Engineering Co., Ellwood City, Pa.

Standard Tool Co., Cleveland, O.  
Walworth Mfg. Co., Boston, Mass.

F. E. Wells & Sons Co., Greenfield, Mass.  
Wells Bros. Co., Greenfield, Mass.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**Stoker Bars—**  
R. W. Whitehurst Co., Norfolk, Va.

**Stokers, Mechanical—**  
Babcock & Wilcox Co., 85 Liberty St., New York.

Alfred Box & Co., Front and Poplar Sts., Philadelphia, Pa.

Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.

McClave-Brooks Co., Scranton, Pa.

**Stone Cutters' Chisels—**  
(See Chisels, Brick, Stone Cutters', &c.)

**Stone Handling Machinery—**  
Browning Engineering Co., Cleveland, O.

**Stone Planers, Saws—**  
(See Planers, Saws.)

**Stone Turning and Planing Machines (combined)—**  
Detrick & Harvey Machine Co., Baltimore, Md.

**Stone Working Machinery—**  
Birmingham Iron Foundry, Derby, Ct.  
Detrick & Harvey Machine Co., Baltimore, Md.

J. Gilmour, Bennett Bldg., New York.  
Igersoll-Rand Co., 11 Broadway, N. Y.

F. R. Patch Mfg. Co., Rutland, Vt.  
A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.

Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

**Stoners, Cherry—**  
Enterprise Mfg. Co. of Pa., Philadelphia, Pa.

Goodell Co., Antrim, N. H.  
John H. Graham & Co., 113 Chambers St., New York.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Rollman Mfg. Co., Mt. Joy, Pa.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Stoners, Peach—**  
Rollman Mfg. Co., Mt. Joy, Pa.

**Stones, Axe—**  
Cleveland Stone Co., Cleveland, O.

Pike Mfg. Co., Pike, N. H.

**Stones, Corundum—**  
(See Stones, Emery and Corundum.)

**Stones, Carriers' and Tanners'—**

Pike Mfg. Co., Pike, N. H.

**Stones, Emery and Corundum—**

American Emery Wheel Works, Providence, R. I.

Monarch Emery & Corundum Wheel Co., Camden, N. J.

Pike Mfg. Co., Pike, N. H.  
Sterling Emery Wheel Mfg. Co., Tiffin, O.

Vitrified Wheel Co., Westfield, Mass.

**Stones, Gold Test—**  
Pike Mfg. Co., Pike, N. H.

**Stones, Hacker—**  
Pike Mfg. Co., Pike, N. H.

**Stones, India—**  
Norton Co., Worcester, Mass.

Pike Mfg. Co., Pike, N. H.

**Stones, Jack—**  
Arcade Mfg. Co., Freeport, Ill.

Columbia Grey Iron Co., Columbia, Pa.

**Stones, Oil and Water—**  
American Emery Wheel Works, Providence, R. I.

Carborundum Co., Niagara Falls, N. Y.  
Norton Co., Worcester, Mass.

Pike Mfg. Co., Pike, N. H.  
Sterling Emery Wheel Mfg. Co., Tiffin, O.

Vitrified Wheel Co., Westfield, Mass.

**Stones, Razor—**  
Norton Co., Worcester, Mass.

Pike Mfg. Co., Pike, N. H.  
Sterling Emery Wheel Mfg. Co., Tiffin, O.

**Stones, Rubbing—**  
American Emery Wheel Works, Providence, R. I.

Norton Co., Worcester, Mass.  
Pike Mfg. Co., Pike, N. H.

Sterling Emery Wheel Mfg. Co., Tiffin, O.



**Stones, Scythe—**

Carborundum Co., Niagara Falls, N. Y.  
 Cleveland Stone Co., Cleveland, O.  
 Norton Co., Worcester, Mass.  
 Pike Mfg. Co., Pike, N. H.  
 Sterling Emery Wheel Mfg. Co., Tiffin, O.

**Stones, Whet—**

Pike Mfg. Co., Pike, N. H.  
 Sterling Emery Wheel Mfg. Co., Tiffin, O.

**Stools, Camp—**

Stanley Works, New Britain, Ct.

**Stools, Factory, Store, &c.—**

W. J. Clark Co., Salem, O.  
 Manufacturing Equipment & Engineering Co., Boston, Mass.  
 New Britain Machine Co., New Britain, Ct.

**Stools, Store—**

(See Store Stools, Iron.)

**Stoppers, Bottle—**

Baird Machine Co., Oakville, Ct.  
 H. O. Canfield Co., Bridgeport, Ct.  
 New York Belting & Packing Co., 91-93 Chambers St., New York.  
 Taplin Mfg. Co., New Britain, Ct.

**Stoppers, Ladle—**

McCallough-Dalzell Crucible Co., Pittsburgh, Pa.  
 R. B. Seidel, Inc., 1334 Callowhill St., Philadelphia, Pa.

**Stops, Bead—**

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Stops, Bench—**

Millers Falls Co., 28 Warren St., N. Y.  
 Charles Morrill, 277 Broadway, N. Y.  
 Seymour Smith & Son, Oakville, Ct.

**Stops, Crane, Limit—**

Electric Controller & Mfg. Co., Cleveland, O.

**Stops, Door—**

Jos. Bardsley, 117-151 Baxter St., N. Y.  
 Caldwell Mfg. Co., Rochester, N. Y.  
 Chapin-Stephens Co., Pine Meadow, Ct.  
 Piqua Handle & Mfg. Co., Piqua, O.  
 Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.  
 Yale & Towne Mfg. Co., 4-15 Murray St., New York.

**Stops, Plug—**

Andrew Wire & Iron Works, Rockford, Ill.

Holt-Lyon Co., Inc., Tarrytown, N. Y.

**Stops, Plane—**

Chapin-Stephens Co., Pine Meadow, Ct.

**Storage Bins, Coal—**

Meehan Boiler & Construction Co., Lowellville, O.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

**Store Door Shutter Screws—**

(See Screws, Shutter, Store Door.)

**Store Fixtures, Shelving—**

Counters, &c.—

J. D. Warren Mfg. Co., Chicago, Ill.

**Store Fixtures, Wire—**

W. S. Tyler Co., Cleveland, O.

**Store Ladders, Trucks—**

(See Ladders, Trucks.)

**Store Stools, Iron—**

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

**Storm Sash Hangers, &c.—**

(See Hangers, &c.)

**Storm Window Fasteners—**

(See Fasteners, Screen and Storm Sash.)

**Stove Blanks—**

Matthiessen & Hegeler Zinc Co., La Salle, Ill.

**Stove Bolts—**

(See Bolts.)

**Stove Door Handles—**

(See Trimmings, Stove.)

**Stove Knobs—**

(See Trimmings, Stove.)

**Stove Pipe—**

(See Pipe, Stove.)

**Stove Pipe Elbows—**

(See Elbows, Stove Pipe.)

**Stove Pipe Machines—**

(See Pipe Machines.)

**Stove Pipe Registers, Shelves, &c.—**

(See Registers, Shelves, &c.)

**Stoves, Alcohol—**

Gem Mfg. Co., Boston, Mass.  
 Landers, Frary & Clark, New Britain, Ct.

**Stoves and Ranges, Gas, Gasoline and Oil—**

Columbia Grey Iron Co., Columbia, Pa.  
 Gem Mfg. Co., Boston, Mass.  
 Schneider & Trenkamp Div., Am. Stove Co., Cleveland, O.  
 Taylor & Boggis Foundry Co., Cleveland, O.

**Stoves, Fire Brick—**

Julian Kennedy, Pittsburgh, Pa.  
 D. Lamond & Son, Pittsburgh, Pa.  
 G. W. McClure, Son & Co., Pittsburgh.

**Stoves, Gas, Hot Plates—**

(See Plates, Hot, Gas.)

**Stoves, Hot Blast for Furnaces—**

D. Lamond & Son, Pittsburgh, Pa.  
 G. W. McClure, Sons & Co., Pittsburgh, Pa.

**Stoves, Hot Water—**

Stuart & Peterson Co., Burlington, N. J.

**Stoves, Lamp Chimney—**

(See Heaters, Lamp Chimney.)

**Stoves, Laundry—**

Stuart & Peterson Co., Burlington, N. J.

**Stoves, Laundry, Gas—**

Schneider & Trenkamp Div., Am. Stove Co., Cleveland, O.

**Stoves, Masons' Drying—**

G. Drouve Co., Bridgeport, Ct.

**Stoves, Oil Lamp—**

Taylor & Boggis Fdy. Co., Cleveland, O.

**Stoves, Tamale—**

S. M. Howes Co., Boston, Mass.

**Stoves, Wood and Coal—**

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

S. Chenev & Son, Manlius, N. Y.

Hess-Snyder Co., Massillon, O.

Richmond Foundry & Mfg. Co., Inc., Richmond, Va.

St. Louis Car Wheel Co., St. Louis, Mo.

Schneider & Trenkamp Co., Div. American Stove Co., Cleveland, O.

Stuart & Peterson Co., Burlington, N. J.

(See also Ranges.)

**Straight Edges—**

(See Edges, Straight.)

**Straightening and Cutting Machines. Automatic Wire-**

Franklin Mfg. Co., New Haven, Ct.  
E. J. Manville Mach. Co., Waterbury, Ct.

**Straightening and Cutting Machines. Sheet Metal-**

F. B. Shuster Co., New Haven, Ct.

**Straightening and Cutting Machines. Strip Metal-**

American Tube & Stamping Co., Bridgeport, Ct.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Niagara Machine & Tool Co., Buffalo, N. Y.

Peck, Stow & Wilcox Co., 27 Murray St., New York

**Straightening and Cutting Machines. Wire-**

Baird Machine Co., Oakville, Ct.

Chandler & Farquhar Co., Boston, Mass.

E. J. Manville Mach. Co., Waterbury, Ct.

A. H. Nilson Machine Co., Bridgeport, Ct.

F. B. Shuster Co., New Haven, Ct.

Wright Wire Co., Worcester, Mass.

**MERCHANTS.**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

S. Obermayer Co., Cincinnati, O.

A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

**Straightening Machinery. Plate-**

Bertsch & Co., Cambridge City, Ind.

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Hilles & Jones Co., Wilmington, Del.

Lewis Foundry & Machine Co., Groveton, Pa.

Mackintosh, Hemphill & Co., Pittsburgh, Pa.

E. J. Manville Machine Co., Waterbury, Ct.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Engineering Co., Alliance, O.

R. S. Newbold & Son Co., Norristown, Pa.

Niles-Bement-Pond Co., 111 Broadway, New York.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

United Engineering & Foundry Co., Pittsburgh, Pa.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

Williams, White & Co., Moline, Ill.

**MERCHANTS.**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.

A. D. White Machinery Co., 19-23 S. Jefferson St., Chicago, Ill.

**Straightening Machines. Angle, Beam and Channel-**

Bertsch & Co., Cambridge City, Ind.

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

Hilles & Jones Co., Wilmington, Del.

Lewis Foundry & Machine Co., Groveton, Pa.

Long & Allstatter Co., Hamilton, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.

Morgan Engineering Co., Alliance, O.

Pittsburgh Mfg. Co., Pittsburgh, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Williams, White & Co., Moline, Ill.

**Straightening Machines. Bar-**

Hartford Machine Screw Co., Hartford, Ct.

**Straightening Machines. Pipe-**

Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

**Straightening Machines. Shaft-**

(See Shaft Straightening Machinery.)

**Straightening Presses. Axle-**

B. B. Noyes & Co., Greenfield, Mass.

Watson-Stillman Co., 50 Church St., New York.

Wells Bros. Co., Greenfield, Mass.

**Straightening Rolls-**

(See Rolls, Bending and Straightening.)

**Straightening Tables-**

Bancroft & Co., Philadelphia, Pa.

**Strainer and Filter. Pump-**

Luther Bros. Co., Milwaukee, Wis.

**Strainers-**

(See Kitchen Articles, Wire.)

**Strainers. Conductor Pipe-**

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

Andrews Wire & Iron Works, Rockford, Ill.

Berger Mfg. Co., Canton, O.

Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

U. T. Hungerford Brass & Copper Co., 497-505 Pearl St., New York.

Ludlow-Saylor Wire Co., St. Louis, Mo.

Fred J. Meyers Mfg. Co., Hamilton, O.

Parker Wire Goods Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Strainers. Gasoline-**

Turner Brass Works, Sycamore, Ill.

**Strainers. Milk, Sanitary. Seamless-**

Sturges & Burn Mfg. Co., Chicago, Ill.

**Strainers. Pipe-**

American Spiral Pipe Works, 48th Ave. and 14th St., Chicago, Ill.

W. & B. Douglas, Middletown, Ct.

Lunkenheimer Co., Cincinnati, O.

**Strainers. Sink-**

Andrews Wire & Iron Works, Rockford, Ill.

Dover Stamping & Mfg. Co., Cambridge, Mass.

Malin & Co., Cleveland, O.

Fred J. Meyers Mfg. Co., Hamilton, O.

Parker Wire Goods Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

**Strainers. Tea and Coffee-**

(See Household Articles, Wire.)

- Strainers, Tea, Silver and Silver Plated—**  
International Silver Co., Meriden, Ct.
- Strainers, Tube Well—**  
A. D. Cook, Lawrenceburg, Ind.
- Strainers, Water—**  
Buffalo Wire Works Co., Buffalo, N. Y.
- Strap and T Hinges—**  
(See Hinges, Strap and T.)
- Strapping and Buffing Machines—**  
(See Buffing and Polishing Machines.)
- Strapping, Harvester—**  
Graton & Knight Mfg. Co., Worcester, Mass.
- Strapping, Loom—**  
Graton & Knight Mfg. Co., Worcester, Mass.
- Straps, Anchor—**  
(See Telegraph and Telephone Pole Supplies.)
- Straps, Baggage Check—**  
American Railway Supply Co., 24 Park Place, New York.
- Straps, Blanket—**  
Graton & Knight Mfg. Co., Worcester, Mass.
- Straps, Box—**  
Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.  
Cary Mfg. Co., 19-21 Roosevelt St., N. Y.
- Straps, Bung—**  
Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.
- Straps, Curtain—**  
McKinnon Daa Co., Buffalo, N. Y.
- Straps, Gas Pipe—**  
Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.
- Loew Mfg. Co., Cleveland, O.**  
Northwestern Consolidated Iron & Steel Mfg. Co., Burlington, Ia.
- Straps, Hammer—**  
Graton & Knight Mfg. Co., Worcester, Mass.
- Oliver Iron & Steel Co., Pittsburgh, Pa.**
- Straps, Harness—**  
Graton & Knight Mfg. Co., Worcester, Mass.
- Straps, Singletree—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Straps, Skate—**  
Graton & Knight Mfg. Co., Worcester, Mass.
- Straps, Sleigh Bell—**  
Bevin Bros. Mfg. Co., Easthampton, Ct.
- Straps, Trunk—**  
Graton & Knight Mfg. Co., Worcester, Mass.
- Straps, Wall, Steel—**  
W. J. Clark Co., Salem, O.
- Straw Knives—**  
(See Knives, Hay and Straw.)
- Street Forks—**  
(See Forks, Hay, Manure, Spading, &c.)
- Street Lamps, Scrapers—**  
(See Lamps, Scrapers.)
- Street Washers—**  
(See Hydrants and Street Washers.)
- Stretchers, Box Strap—**  
Cary Mfg. Co., 19-21 Roosevelt St., N. Y.
- Stretchers, Carpet—**  
Arcade Mfg. Co., Freeport, Ill.
- Stretchers, Electric Wire—**  
Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.
- Stretchers, Fence and Wire—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Arcade Mfg. Co., Freeport, Ill.  
De Kalb Fence Co., De Kalb, Ill.  
Gilbert & Bennett Mfg. Co., 27 Broadway, New York.
- Louden Machinery Co., Fairfield, Ia.**  
**Ney Mfg. Co., Canton, O.**  
**Wrightsville Hardware Co., Wrightsville, Pa.**
- Stretchers, Glove—**  
Bancroft & Co., Philadelphia, Pa.
- Stretchers, Saw—**  
(See Rods, Saw.)
- Stretchers, Trousers—**  
Covert Mfg. Co., West Troy, N. Y.
- Strikers, Lock and Latch—**  
(See Locks, Latches, &c.)
- Stringers, Fish—**  
Andrew B. Hendryx Co., New Haven, Ct.
- Strip Steel, Cold Rolled—**  
(See Steel, Cold Rolled Strip.)
- Strippers, Electric Ingot—**  
Alliance Machine Co., Alliance, O.  
Morgan Engineering Co., Alliance, O.
- Pawling & Harnischfeger, Milwaukee, Wis.**
- Strippers, Electro-Hydraulic Ingot—**  
Alliance Machine Co., Alliance, O.  
Morgan Engineering Co., Alliance, O.
- Strippers, Hydraulic Ingot—**  
Alliance Machine Co., Alliance, O.  
Morgan Engineering Co., Alliance, O.
- Strops, Razor—**  
Clausen Shear Co., Fremont, O.
- Pike Mfg. Co., Pike, N. H.**
- Structural Iron and Steel Work—**  
American Bridge Co. of New York, 30 Church St., New York.  
Baltimore Bridge Co., Baltimore, Md.  
Berlin Construction Co., Berlin, Ct.  
Bethlehem Steel Co., So. Bethlehem, Pa.  
Boston Bridge Works, Boston, Mass.  
Carnegie Steel Co., Pittsburgh, Pa.  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
Interstate Engineering Co., Bedford O.  
Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.  
W. N. Kratzer & Co., Pittsburgh, Pa.  
McClintic - Marshall Construction Co., Pittsburgh, Pa.  
Meehan Boiler & Construction Co., Lowellville, O.  
Northern Engineering Works, Detroit.  
Riter-Conley Mfg. Co., Pittsburgh, Pa.  
St. Louis Car Wheel Co., St. Louis, Mo.  
Wm. B. Scaife & Sons Co., Pittsburgh, Pa.
- Lewis F. Shoemaker & Co., Harrison Bldg., Philadelphia, Pa.**  
**Stewart Iron Works Co., Cincinnati, O.**  
**Virginia Bridge & Iron Co., Roanoke, Va.**  
**Vollkommer & Co., Pittsburgh, Pa.**
- Structural Material—**  
American Bridge Co. of New York, 30 Church St., New York.

Baltimore Bridge Co., Baltimore, Md.  
 Berlin Construction Co., Berlin, Ct.  
 Bethlehem Foundry & Machine Co.,  
 South Bethlehem, Pa.  
 Bethlehem Steel Co., So. Bethlehem, Pa.  
 Boston Bridge Works, Boston, Mass.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Chattanooga Roofing & Foundry Co.,  
 Chattanooga, Tenn.  
 Forest City Steel & Iron Co., Cleveland.  
 Henry A. Hitner's Sons Co., Hunt-  
 ington & Aramingo Aves., Philadel-  
 phia, Pa.

Interstate Engineering Co., Bedford, O.  
 Interstate Iron & Steel Co., First Na-  
 tional Bank Bldg., Chicago, Ill.  
 Jones & Laughlin Steel Co., Pittsburgh.  
 W. N. Kratzer & Co., Pittsburgh, Pa.  
 Lackawanna Steel Co., 2 Rector St., N.Y.  
 McClintic-Marshall Construction Co.,  
 Pittsburgh, Pa.

Northern Engineering Works, Detroit.  
 Phoenix Iron Co., 410 Walnut St., Phila-  
 delphia, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.  
 Riter-Conley Mfg. Co., Pittsburgh, Pa.  
 Wm. B. Scaife & Sons Co., Pittsburgh, Pa.  
 Lewis F. Shoemaker & Co., Harrison  
 Bldg., Philadelphia, Pa.  
 Stewart Iron Works Co., Cincinnati, O.  
 Virginia Bridge & Iron Co., Roanoke, Va.

**MERCHANTS.**

Bourae-Fuller Co., Cleveland, O.  
 Dilworth, Gilbert & Towne, Inc., 35-37  
 Wooster St., New York.  
 Cal. Hirsch & Sons Iron & Rail Co.,  
 St. Louis, Mo.

C. B. Houston & Co., Girard Trust  
 Bldg., Philadelphia, Pa.  
 Harold McCalla, 444 Fairmount Ave.,  
 Philadelphia, Pa.

Edgar M. Moore & Co., Pittsburgh, Pa.  
 Edmund W. Mudge & Co., Pittsburgh, Pa.  
 North Works, Illinois Steel Co., Chicago, Ill.  
 Pierson & Co., 29 Broadway, New York.  
 Horace T. Potts & Co., 318-320 N. Third  
 St., Philadelphia, Pa.

Joseph T. Ryerson & Son, 18-22 Milwa-  
 kee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted  
 St., Chicago, Ill.

**Stubs and Plates, Store  
 Shutter—**

Reading Hardware Co., Reading, Pa.  
 Russell & Erwin Mfg. Co., 94-98 Lafayette  
 St., New York.

**Stubs, Awning, Expansion—**  
 Star Expansion Bolt Co., 147-149 Cedar  
 St., New York.

**Stud Bolts, Chain—**

(See Bolts, Chain.)

**Studs, Brass and Iron—**

American Iron & Steel Mfg. Co., Leba-  
 non, Pa.  
 Blake & Johnson Co., Waterbury, Ct.  
 Chicago Screw Co., 2 No. Canal St.,  
 Chicago, Ill.

Clark Bros. Bolt Co., Milldale, Ct.  
 Detroit Screw Works, Detroit, Mich.  
 Hanson Bros., Plainville, Ct.

Hartford Machine Screw Co., Hartford, Ct.  
 Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
 National-Acme Mfg. Co., Cleveland, O.

New Haven Machine Screw Co., New  
 Haven, Ct.

Pittsburgh Screw & Bolt Co., Pittsburgh.  
 Progressive Mfg. Co., Torrington, Ct.

**Studs, Dog Collar and Bag—**

R. C. Jenkinson & Co., Newark, N. J.  
 Judson L. Thomson Mfg. Co., Waltham,  
 Mass.

**Studs, Harness—**

Judson L. Thomson Mfg. Co., Waltham,  
 Mass.

Wire Goods Co., Worcester, Mass.

**Studs, Special—**

H. C. Cook & Co., Ansonia, Ct.

**Stuffers, Sausage—**

Enterprise Mfg. Co. of Pa., Philadelphia,  
 Pa.

Peck, Stow & Wilcox Co., 27 Murray St.,  
 New York.

Silver Mfg. Co., Salem, O.

**Stamp Joints—**

(See Joints, Stamp.)

**Sub Presses—**

(See Presses, Sub.)

**Suction Faucets—**

(See Faucets, Suction.)

**Sugar House Machinery—**

American Tool & Machine Co., Boston,  
 Mass.

Baltimore Bridge Co., Baltimore, Md.  
 Bethlehem Foundry & Machine Co.,  
 South Bethlehem, Pa.

Buffalo Forge Co., Buffalo, N. Y.  
 John H. McGowan Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85  
 Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.  
 Niles-Bement-Pond Co., 111 Broadway,  
 New York.

Thomas Prosser & Son, 26 Platt St., N.Y.  
 R. D. Wood & Co., 400 Chestnut St.,  
 Philadelphia, Pa.

**Sulphate of Iron—**

American Steel & Wire Co., Commercial  
 National Bank Bldg., Chicago, Ill.

**Sulphuric Acid—**

(See Acid, Sulphuric.)

**Summer Houses—**

(See Houses, Wire, Summer.)

**Sun Dials—**

Wm. Gardam & Son, 221 Fulton St.,  
 New York.

**Superheaters, Steam—**

Babcock & Wilcox Co., 85 Liberty St.,  
 New York.

Parker Boiler Co., Pennsylvania Bldg.,  
 Philadelphia, Pa.

Power Specialty Co., 111 Broadway, N. Y.

**Supplies, Architects' and  
 Artists'—**

Keuffel & Esser Co., 127 Fulton St., N.Y.

**Supplies, Foundry, Mill.  
 &c.—**

(See Foundry and Mill Supplies.)

**Supplies, Grinders' and Pol-  
 ishers'—**

(See Grinders' and Polishers' Supplies.)

**Supplies, Tube, Well—**

(See Well Supplies.)

**Supports and Bars, Ham-  
 mock—**

I. E. Palmer Co., Middletown, Ct.

**Supports and Bolts, Sash—**

Smith & Egge Mfg. Co., Bridgeport, Ct.

**Supports, Counter—**

Bethlehem Foundry & Machine Co., So.  
 Bethlehem, Pa.

**Supports. Mail Box. Rural—**  
Globe Machine & Stamping Co., Cleveland, O.

**Supports. Porch—**  
Columbia Grey Iron Co., Columbia, Pa.  
Reading Hardware Co., Reading, Pa.  
Suzquehanna Casting Co., Wrightsville, Pa.

**Supports. Scaffold—**  
Richards Mfg. Co., Aurora, Ill.

**Supports. Shelf—**  
(See Pins, Shelf.)

**Supports. Telegraph Pole—**  
Mathias Klein & Sons, 87-89 W. Van Buren St., Chicago, Ill.

**Surface Grinders—**  
(See Grinders, Surface.)

**Surface Plates. Standard—**  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Gould & Eberhardt, Newark, N. J.

**Surfacers. Wood—**  
Oliver Machinery Co., Grand Rapids, Mich.

Lane Mfg. Co., Montpelier, Vt.

**Swage Blocks—**  
(See Blocks, Swage.)

**Swages. Saw Tooth—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Henry Diston & Sons, Philadelphia, Pa.  
National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

**Swages. Tie Plate—**  
Hubbard & Co., Pittsburgh, Pa.

**Swaging Machines—**  
American Tube & Stamping Co., Bridgeport, Ct.

E. W. Bliss Co., Brooklyn, N. Y.  
Excelsior Needle Co., Torrington, Ct.  
Ferracute Machine Co., Bridgeton, N. J.  
Chas. Leffler & Co., Brooklyn, N. Y.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Swedish Iron and Steel—**  
(See Iron and Steel, Swedish.)

**Sweepers. Lawn—**  
Philadelphia Lawn Mower Co., 3100-3109 Chestnut St., Philadelphia, Pa.  
Supplee Hardware Co., Market and 5th Sts., Philadelphia, Pa.

**Sweeping Machines. Street—**  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

**Swings. Lawn—**  
Keystone Farm Machine Co., York, Pa.  
F. E. Myers & Bro., Ashland, O.

**Switchboards—**  
Crocker-Wheeler Co., Ampere, N. J.  
Fort Wayne Electric Works, Fort Wayne, Ind.

General Electric Co., Schenectady, N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Zucker & Levett & Loeb Co., 526-530 West 25th St., New York.

**Switchboards. Railroad—**  
Central Track Supply Co., Springfield, O.

**Switchboards. Telephone—**  
Holtzer-Cabot Electric Co., Boston, Mass.

**Switches and Cut-outs. Electric—**  
General Electric Co., Schenectady, N. Y.

**Switches and Frogs. Railroad—**

Atlas Car & Mfg. Co., Cleveland, O.  
Barbour-Stockwell Co., Cambridgeport, Mass.

Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.

Central Track Supply Co., Springfield, O.  
Indianapolis Switch & Frog Co., Springfield, O.

Arthur Koppel, Pittsburgh, Pa.

Henry Lewis & Co., 26 S. 15th St., Philadelphia, Pa.

Thomas Cresser & Son, 26 Platt St., N. Y.  
Ernst Wiener Co., Church and Fulton Sts., New York.

#### MERCHANTS.

Richardson & Co. Inc., Pittsburgh, Pa.  
Robinson & Orr, Pittsburgh, Pa.

**Switches. Brick and Stone Yard—**

Chase Foundry & Mfg. Co., Columbus, O.

**Switches. Derailing—**

Central Track Supply Co., Springfield, O.  
Indianapolis Switch & Frog Co., Springfield, O.

**Switches. Electric Knife—**  
Electric Controller & Mfg. Co., Cleveland, O.

General Electric Co., Schenectady, N. Y.  
Ideal Switch Co., Plainville, Ct.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Switches. Ignition—**  
Ideal Switch Co., Plainville, Ct.

**Switches. Industrial Railway—**

Chase Foundry & Mfg. Co., Columbus, O.

**Switches. Magnetic—**  
Electric Controller & Mfg. Co., Cleveland, O.

**Switches. Mill and Shop—**  
Chase Foundry & Mfg. Co., Columbus, O.

**Switches. Overhead Carrying—**

Louden Machinery Co., Fairfield, Ia.

**Switches. Overhead Tramway—**

Richards Mfg. Co., Aurora, Ill.

**Switches. Remote Central—**  
(See Switches, Magnetic.)

**Switching Ropes—**  
(See Ropes, Locomotive Switching.)

**Switchstands. Railroad—**  
Indianapolis Switch & Frog Co., Springfield, O.

**Swivels. Chain—**  
Bradlee & Co., Beach St. and E. Susquehanna Ave., Philadelphia, Pa.

Covert Mfg. Co., Troy, N. Y.  
Keystone Drop Forge Works, Chester, Pa.

Oneida Community, Kenwood, N. Y.  
Wire Goods Co., Worcester, Mass.

**Swivels. Halter. Harness.**

**&c.—**  
(See Snaps and Swivels, Halter, Harness, &c.)

**Swivels, Rope—**

Broderick & Bascom Rope Co., St. Louis.  
Covert Mfg. Co., Troy, N. Y.  
Keystone Drop Forge Works, Chester, Pa.  
Thomas Laughlin Co., Portland, Me.  
A. Leachen & Sons Rope Co., St. Louis.  
W. & J. Tiebout, 118 Chambers St., New York.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Syrup Pitchers—**

(See Pitchers, Silver Plated.)

**Table Cutlery, &c.—**

(See Cutlery, &c.)

**Tables, Canopy—**

Hurley Machine Co., 153-159 S. Jefferson St., Chicago, Ill.

**Tables, Display—**

Standard Wire Co., New Castle, Pa.

**Tables, Drafting—**

Keuffel & Esser Co., 127 Fulton St., N. Y.  
E. E. Kidder, Worcester, Mass.  
Morgan Construction Co., Worcester, Mass.

Oliver Machinery Co., Grand Rapids, Mich.

Washburn Shops, Worcester, Mass.

**Tables, Folding, Paper Hangers'—**

Webster & Perks Tool Co., Springfield, O.

**Tables, Laundry—**

W. J. Clark Co., Salem, O.

**Tables, Lunch Bar—**

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

**Tables, Office and Shop, Steel—**

W. J. Clark Co., Salem, O.

**Tables, Rolling Mill—**

Mesta Machine Co., Pittsburgh, Pa.  
Morgan Engineering Co., Alliance, O.  
United Engineering & Foundry Co., Pittsburgh, Pa.

**Tables, Saw—**

E. C. Atkins & Co., Indianapolis, Ind.  
Badger State Machine Co., Inc., Janesville, Wis.

Colburn Machine Tool Co., Franklin, Pa.

Crescent Machine Co., Leetonia, O.

Fox Machine Co., Grand Rapids, Mich.

Oliver Machinery Co., Grand Rapids, Mich.

**Tables, Shear—**

Mesta Machine Co., Pittsburgh, Pa.  
Morgan Construction Co., Worcester, Mass.

United Engineering & Foundry Co., Pittsburgh, Pa.

**Tables, Stock Room—**

W. J. Clark Co., Salem, O.

**Tables, Straightening—**

Bancroft & Co., Philadelphia, Pa.

**Tables, Transfer—**

(See Transfer Tables, Railroad.)

**Tablets, Bronze—**

Glen Mfg. Co., Ellwood City, Pa.

**Tachodometers—**

Veeder Mfg. Co., Hartford, Ct.

Schuchardt & Schutte, 90 West St., N. Y.

**Tachometers—**

(See Indicators, Speed. See also Tachometers.)

**Tack Claws, Hammers, Pullers—**

(See Claws, Hammers, Pullers.)

**Tack Machinery—**

Kimball Bros. & Sprague, Brockton, Mass.

H. J. Miller's Sons, Bridgewater, Mass.

Henry Perkins Co., Bridgewater, Mass.

F. B. Shuster Co., New Haven, Ct.

**Tack Plate Choppers and Slitters—**

Henry Perkins Co., Bridgewater, Mass.

**Tack Wire—**

(See Wire, Tack.)

**Tackle Blocks, Pulleys, &c.—**

(See Blocks, Pulleys, &c.)

**Tackle, Fishing—**

Clark-Horrocks Co., Utica, N. Y.

Andrew B. Hendryx Co., New Haven, Ct.

**Tacks and Nails, Brass—**

(See Nails and Tacks.)

**Tacks and Nails, Shoe—**

Globe-Taunton Nail Co., Taunton, Mass.

Grand Crossing Tack Co., Grand Crossing, Ill.

H. J. Miller's Sons, Bridgewater, Mass.

Milwaukee Tack Co., Milwaukee, Wis.

E. Phillips & Sons, South Hanover, Mass.

Ripley & Bartlett, Plymouth, Mass.

Shelton Co., Shelton, Ct.

Tower Mfg. Co., Cincinnati, O.

**Tacks and Nails, Zinc—**

Grand Crossing Tack Co., Grand Crossing, Ill.

Milwaukee Tack Co., Milwaukee, Wis.

**Tacks, Bill Poster and Railroad—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Globe-Taunton Nail Co., Taunton, Mass.

H. J. Miller's Sons, Bridgewater, Mass.

Milwaukee Tack Co., Milwaukee, Wis.

Shelton Co., Shelton, Ct.

Tower Mfg. Co., Cincinnati, O.

**Tacks, Box, Basket, &c.—**

Cobb & Drew, Inc., Plymouth, Mass.

Grand Crossing Tack Co., Grand Crossing, Ill.

Milwaukee Tack Co., Milwaukee, Wis.

E. Phillips & Sons, South Hanover, Mass.

Shelton Co., Shelton, Ct.

Tower Mfg. Co., Cincinnati, O.

**Tacks, Brads, Finishing Nails, &c.—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Globe-Taunton Nail Co., Taunton, Mass.

Grand Crossing Tack Co., Grand Crossing, Ill.

H. J. Miller's Sons, Bridgewater, Mass.

Milwaukee Tack Co., Milwaukee, Wis.

Morgan Spring Co., Worcester, Mass.

Parker Wire Goods Co., Worcester, Mass.

E. Phillips & Sons, South Hanover, Mass.

Ripley & Bartlett, Plymouth, Mass.

Shelton Co., Shelton, Ct.

Tower Mfg. Co., Cincinnati, O.

C. E. & E. P. Townsend Co., New Brighton, Pa.

Turner & Stanton Co., Norwich, Ct.

Wire Goods Co., Worcester, Mass.

**Tacks, Bronze—**

Phosphor Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.

**Tacks, Brush—**

(See Nails and Tacks, Brush.)

**Tacks, Canvas—**

H. J. Miller's Sons, Bridgewater, Mass.

**Tacks, Carpet—**

(See Tacks, Brads, Finishing Nails, &c.)

**Tacks, Coopers—**

Grand Crossing Tack Co., Grand Crossing, Ill.

Milwaukee Tack Co., Milwaukee, Wis.

Tower Mfg. Co., Cincinnati, O.

**Tacks, Copper—**

(See Nails and Tacks, Copper.)

**Tacks, Curtain—**

Grand Crossing Tack Co., Grand Crossing, Ill.

Henry J. Miller's Sons, Bridgewater, Mass.

**Tacks, Cut—**

(See Tacks, Brads and Finishing Nails.)

**Tacks, Double-Pointed—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Cobb & Drew, Inc., Plymouth, Mass.

W. D. Gibson Co., Huron and Kingsbury Sts., Chicago, Ill.

Grand Crossing Tack Co., Grand Crossing, Ill.

Milwaukee Tack Co., Milwaukee, Wis.

Morgan Spring Co., Worcester, Mass.

Parker Wire Goods Co., Worcester, Mass.

E. H. Titchener & Co., Binghamton, N.Y.

Tower Mfg. Co., Cincinnati, O.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Tacks, Galvanized—**

Shelton Co., Shelton, Ct.

Thomas Laughlin Co., Portland, Me.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Tacks, Hide or Tanners'—**

(See Nails, Hide or Tanners'.)

**Tacks, Lace and Gimp, Japanned—**

E. Phillips & Sons, So. Hanover, Mass.

Tower Mfg. Co., Cincinnati, O.

**Tacks, Miners'—**

Henry J. Miller's Sons, Bridgewater, Mass.

Milwaukee Tack Co., Milwaukee, Wis.

Ripley & Bartlett, Plymouth, Mass.

Shelton Co., Shelton, Ct.

Tower Mfg. Co., Cincinnati, O.

**Tacks, Phosphor-Bronze—**

Phosphor-Bronze Smelting Co., 2200 Washington Ave., Philadelphia, Pa.

**Tacks, Roofing—**

H. J. Miller's Sons, Bridgewater, Mass.

**Tacks, Rubber Head—**

H. O. Canfield Co., Bridgeport, Ct.

Elastic Tip Co., Boston, Mass.

**Tacks, Stamp or Whiskey—**

H. J. Miller's Sons, Bridgewater, Mass.

Tower Mfg. Co., Cincinnati, O.

**Tacks, Swede and American Iron—**

(See Tacks, Brads, Finishing Nails, &c.)

**Tacks, Thumb—**

Kenuff & Esser Co., 127 Fulton St., N. Y.

**Tacks, Tin Cap—**

Grand Crossing Tack Co., Grand Crossing, Ill.

**Tacks, Tinned—**

Tower Mfg. Co., Cincinnati, O.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Tacks, Trimmers'—**

Grand Crossing Tack Co., Grand Crossing, Ill.

E. Phillips & Sons, South Hanover, Mass.

Shelton Co., Shelton, Ct.

Tower Mfg. Co., Cincinnati, O.

**Tacks, Trunk—**

H. J. Miller's Sons, Bridgewater, Mass.

Tower Mfg. Co., Cincinnati, O.

**Tacks, Upholsterers', Gimp and Lace—**

Cobb & Drew, Inc., Plymouth, Mass.

Globe-Taunton Nail Co., Taunton, Mass.

Grand Crossing Tack Co., Grand Crossing, Ill.

Henry J. Miller's Sons, Bridgewater, Mass.

Milwaukee Tack Co., Milwaukee, Wis.

E. Phillips & Sons, South Hanover, Mass.

Ripley & Bartlett, Plymouth, Mass.

Shelton Co., Shelton, Ct.

Tower Mfg. Co., Cincinnati, O.

**Tag Fasteners—**

(See Fasteners, Tag.)

**Tags, Brass—**

Arthur T. Rutter & Co., 256 Broadway, New York.

Waterbury Brass Co., Waterbury, Ct.

**Tags, Hotel Key—**

American Railway Supply Co., 24 Park Place, New York.

**Talc Crayons—**

(See Crayons, Lumber, Marble, Metal Workers', &c.)

**Talc Powder—**

(See Powder, Talc.)

**Tallow Pots—**

(See Pots.)

**Tampers and Scrapers (combined)—**

Hubbard & Co., Pittsburgh, Pa.

**Tampers, Earth, Grout, &c.—**

Western Foundry & Sash Weight Co., 2d and Miller Sts., St. Louis, Mo.

**Tampers, Sod, Cement—**

Heath Foundry & Mfg. Co., Plymouth, O.

**Tank Governors, &c.—**

(See Governors, &c.)

**Tank Work—**

Abendroth & Root Mfg. Co., Newburgh, N. Y.

American Welding Co., Carbondale, Pa.

Baltimore Bridge Co., Baltimore, Md.

Duff Patents Co., Pittsburgh, Pa.

Forest City Steel & Iron Co., Cleveland.

Franklin Boiler Works Co., Troy, N. Y.

S. Freeman & Sons Mfg. Co., Racine, Wis.

Heine Safety Boiler Co., St. Louis, Mo.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

E. Keeler Co., Williamsport, Pa.

Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.

Meehan Boiler & Construction Co., Lowellville, O.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

R. S. Newbold & Son Co., Norristown, Pa.

Northern Engineering Works, Detroit, Mich.

Pennsylvania Engineering Works, New Castle, Pa.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Ritter-Conley Mfg. Co., Pittsburgh, Pa.  
 Wm. B. Scaife & Sons Co., Pittsburgh, Pa.  
 Tudor Boiler Mfg. Co., Cincinnati, O.  
 Virginia Bridge & Iron Co., Roanoke, Va.  
 Warren City Tank & Boiler Co., Warren, O.  
 Robert Wetherill & Co., Chester, Pa.  
 Wickes Bros., Saginaw, Mich.

**MERCHANTS.**

Buell & Mitchell, 120 Liberty St., N. Y.

**Tanks, Acid—**

(See Acid Tanks, Tubs, &c.)

**Tanks, Acid Wire Mill—**  
 Morgan Construction Co., Worcester, Mass.

**Tanks, Alcohol—**

American Welding Co., Carbondale, Pa.  
 Gem Mfg. Co., Boston, Mass.

**Tanks, Automobile—**

Avery Stamping Co., Cleveland, O.  
 E. B. Badger & Sons Co., Boston, Mass.  
 Janney, Steinmetz & Co., Drexel Bldg., Philadelphia, Pa.  
 John R. Keim Mills, Inc., Buffalo, N. Y.  
 Wm. B. Scaife & Sons Co., Pittsburgh.

**Tanks, Blow Off—**

(See Blow Off Tanks.)

**Tanks, Car—**

Meehan Boiler & Construction Co., Lowellville, O.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

Petroleum Iron Works Co., Sharon, Pa.  
 Wm. B. Scaife & Sons Co., Pittsburgh.

**Tanks, Chemical Proof—**

American Welding Co., Carbondale, Pa.  
 Zucker & Levett & Loeb Co., 525-530 W. 25th St., New York.

**Tanks, Cold Drawn Steel—**

Avery Stamping Co., Cleveland, O.  
 Janney, Steinmetz & Co., Drexel Bldg., Philadelphia, Pa.

John R. Keim Mills, Inc., Buffalo, N. Y.

**Tanks, Dipping, Steel—**

Meehan Boiler & Construction Co., Lowellville, O.

Wm. B. Scaife & Sons Co., Pittsburgh.

**Tanks, Expansion and Anti-Expansion—**

Wm. B. Scaife & Sons Co., Pittsburgh.

**Tanks, Factory—**

Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

W. E. Caldwell Co., Louisville, Ky.  
 W. J. Clark Co., Salem, O.

Franklin Boiler Works Co., Troy, N. Y.  
 S. Freeman & Sons Mfg. Co., Racine, Wis.

Heine Safety Boiler Co., St. Louis, Mo.  
 E. Keeler Co., Williamsport, Pa.

Benj. F. Kelley & Son, 91 Liberty St., New York.

Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.

Meehan Boiler & Construction Co., Lowellville, O.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

R. S. Newbold & Son Co., Norristown, Pa.  
 Petroleum Iron Works Co., Sharon, Pa.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

Tudor Boiler Mfg. Co., Cincinnati, O.

Wickes Bros., Saginaw, Mich.

Winship Mfg. Co., Racine, Wis.

**Tanks for Plumbing Purposes—**

John R. Keim Mills, Inc., Buffalo, N. Y.

**Tanks, Gas, Air, Soda Water, &c.—**

American Gas Machine Co., Albert Lea, Minn.

American Welding Co., Carbondale, Pa.  
 American Well Works, Aurora, Ill.

Avery Stamping Co., Cleveland, O.  
 S. Freeman & Sons Mfg. Co., Racine, Wis.

Ingersoll-Rand Co., 11 Broadway, N. Y.  
 Janney, Steinmetz & Co., Philadelphia.

E. Keeler Co., Williamsport, Pa.  
 Meehan Boiler & Construction Co., Lowellville, O.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

Pennsylvania Engineering Works, New Castle, Pa.

Pressed Steel Tank Co., Milwaukee, Wis.  
 Thomas Prosser & Son, 26 Platt St., N. Y.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.  
 Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.  
 Tudor Boiler Mfg. Co., Cincinnati, O.

**Tanks, Gasoline—**

American Welding Co., Carbondale, Pa.  
 S. Freeman & Sons Mfg. Co., Racine, Wis.

Gem Mfg. Co., Boston, Mass.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

**Tanks, Gasoline, Underground—**

S. Freeman & Sons Mfg. Co., Racine, Wis.

B. Scaife & Sons Co., Pittsburgh, Pa.

**Tanks, Grain—**

S. Freeman & Sons Mfg. Co., Racine, Wis.

Meehan Boiler & Construction Co., Lowellville, O.

R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

B. Scaife & Sons Co., Pittsburgh, Pa.  
 Tudor Boiler Mfg. Co., Cincinnati, O.

**Tanks, Hot Water—**

W. E. Caldwell Co., Louisville, Ky.  
 S. Freeman & Sons Mfg. Co., Racine, Wis.

Meehan Boiler & Construction Co., Lowellville, O.

Wm. B. Scaife & Sons, Pittsburgh, Pa.  
 Tudor Boiler Mfg. Co., Cincinnati, O.

**Tanks, Mixing, Square and Deep—**

Stuart & Peterson Co., Burlington, N. J.

**Tanks, Oil—**

American Welding Co., Carbondale, Pa.  
 American Well Works, Aurora, Ill.

W. E. Caldwell Co., Louisville, Ky.  
 W. J. Clark Co., Salem, O.

Delphos Mfg. Co., Delphos, O.  
 S. Freeman & Sons Mfg. Co., Racine, Wis.

Gem Mfg. Co., Boston, Mass.



E. Keeler Co., Williamsport, Pa.  
 Meehan Boiler & Construction Co., Lowellville, O.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.  
 Pennsylvania Engineering Works, New Castle, Pa.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Ritter-Conley Mfg. Co., Pittsburgh, Pa.  
 Wm. B. Scaife & Sons Co., Pittsburgh, Pa.  
 Tudor Boiler Mfg. Co., Cincinnati, O.  
 Warren City Tank & Boiler Co., Warren, O.

**Tanks, Range—**  
 Dover Stamping & Mfg. Co., Cambridge, Mass.

**Tanks, Stock and Wind Mill, Steel—**

W. E. Caldwell Co., Louisville, Ky.  
 S. Freeman & Sons Mfg. Co., Racine, Wis.  
 E. Keeler Co., Williamsport, Pa.  
 Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.  
 Mast-Foss & Co., Springfield, O.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.  
 R. S. Newbold & Son Co., Norristown, Pa.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Wm. B. Scaife & Sons Co., Pittsburgh, Pa.  
 Warren City Tank & Boiler Co., Warren, O.

**Tanks, Stock and Wind Mill, Wooden—**

W. E. Caldwell Co., Louisville, Ky.  
 Mast-Foss & Co., Springfield, O.  
 Winship Mfg. Co., Racine, Wis.

**Tanks, Varnish—**  
 American Welding Co., Carbondale, Pa.  
 Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

**Tanks, Welded—**  
 American Welding Co., Carbondale, Pa.  
 B. Scaife & Sons Co., Pittsburgh, Pa.

**Tanners' Tacks—**  
 (See Nails, Hide or Tanners')

**Tannery Machinery—**  
 A. L. Schultz & Son, 570-572 Elston Ave., Chicago, Ill.

**Tap and Heel Stock—**  
 Graton & Knight Mfg. Co., Worcester, Mass.

**Tap Bolts, Drills, &c.—**  
 (See Bolts, Drills, &c.)

**Taper Rolling Machines—**  
 Williams, White & Co., Moline, Ill.

**Taper Threading Machines—**  
 Acme Machinery Co., Cleveland, O.  
 Webster & Perks Tool Co., Springfield, O.

**Tapes, Measuring—**  
 (See Measures, Tape.)

**Tapping and Reaming Machines—**  
 Landis Machine Co., Waynesboro, Pa.

**Tapping and Reaming Machines, Multiple Spindle—**  
 Acme Machinery Co., Cleveland, O.  
 National Machinery Co., Tiffin, O.

**Tapping and Reaming Machines, Pneumatic—**  
 Helwig Mfg. Co., St. Paul, Minn.

**Tapping and Reaming Machines, Portable—**  
 Gem Mfg. Co., Pittsburgh, Pa.  
 Ingersoll-Rand Co., 11 Broadway, N. Y.  
 Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.  
 Stow Mfg. Co., Binghamton, N. Y.

**Tapping Attachments—**  
 Gould & Eberhardt, Newark, N. J.  
 Whitney Mfg. Co., Hartford, Ct.

**Tapping Machines—**  
 Acme Machinery Co., Cleveland, O.  
 American Tool Works Co., Cincinnati, O.  
 Butterfield & Co., Derby Line, Vt.  
 Cincinnati-Bickford Tool Co., Cincinnati, O.  
 Garvin Machine Co., Spring and Varick Sts., New York.

Gem Mfg. Co., Pittsburgh, Pa.  
 Gould & Eberhardt, Newark, N. J.  
 Grant Mfg. & Machine Co., Bridgeport, Ct.

Hartford Machine Screw Co., Hartford, Ct.  
 Harvey Hubbell, Bridgeport, Ct.  
 Landis Machine Co., Waynesboro, Pa.  
 E. J. Manville Machine Co., Waterbury, Ct.

National Machine Co., Hartford, Ct.  
 National Machinery Co., Tiffin, O.  
 Niles-Bement-Pond Co., 111 Broadway, New York.

Pratt & Whitney Co., Hartford, Ct.  
 A. D. Quint, Hartford, Ct.  
 D. Saunders' Sons, Yonkers, N. Y.  
 Schuchardt & Schutte, 80 West St., N. Y.  
 Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.  
 Stow Mfg. Co., Binghamton, N. Y.  
 Webster & Perks Tool Co., Springfield, O.  
 F. E. Wells & Sons Co., Greenfield, Mass.  
 Wells Bros. Co., Greenfield, Mass.  
 Wiley & Russell Mfg. Co., Greenfield, Mass.

Williams, White & Co., Inc., Moline, Ill.

#### MERCHANTS.

Baird Machinery Co., Pittsburgh, Pa.  
 Hill, Clarke & Co., Boston, Mass.  
 Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.  
 Marshall & Hushart Machinery Co., 62 S. Canal St., Chicago, Ill.  
 Edgar M. Moore & Co., Pittsburgh, Pa.  
 Motch & Merryweather Machinery Co., Cleveland, O.  
 Prentiss Tool & Supply Co., 115 Liberty St., New York.  
 F. P. Schlelein Machinery Co., Pittsburgh, Pa.  
 Vandyck, Churchill Co., 8 Dey St., N. Y.  
 A. D. White Machinery Co., 39-41 S. Canal St., Chicago, Ill.

**Tapping Machines, Automatic—**

National Machinery Co., Tiffin, O.  
**Tapping Machines, Nut—**  
 Acme Machinery Co., Cleveland, O.  
 Automatic Machine Co., Bridgeport, Ct.  
 Blake & Johnson Co., Waterbury, Ct.  
 Landis Machine Co., Waynesboro, Pa.  
 National Machinery Co., Tiffin, O.  
 Niles-Bement-Pond Co., 111 Broadway, New York.

**Waterbury Farrel Foundry & Machine Co.,** Waterbury, Ct.  
**Webster & Perks Tool Co.,** Springfield, O.  
**Wells Bros. Co.,** Greenfield, Mass.

**Tapping Machines, Nut, Automatic—**

**Acme Machinery Co.,** Cleveland, O.

**Tapping Machines, Turn buckle—**

**Acme Machinery Co.,** Cleveland, O.  
**National Machinery Co.,** Tiffin, O.  
**Webster & Perks Tool Co.,** Springfield, O.

**Taps—**  
**Charles H. Besly & Co.,** 15-21 S. Clinton St., Chicago, Ill.

**Butterfield & Co.,** Derby Line, Vt.  
**J. M. Carpenter Tap & Die Co.,** Pawtucket, R. I.

**Cleveland Twist Drill Co.,** Cleveland, O.  
**Hartford Machine Screw Co.,** Hartford, Ct.  
**Lapointe Machine Tool Co.,** Hudson, Mass.

**Manning, Maxwell & Moore, Inc.,** 85 Liberty St., New York.

**Morse Twist Drill & Machine Co.,** New Bedford, Mass.

**Pratt & Whitney Co.,** Hartford, Ct.  
**E. F. Reece Co.,** Greenfield, Mass.

**Standard Tool Co.,** Cleveland, O.  
**Wells Bros. Co.,** Greenfield, Mass.

**Whitman & Barnes Mfg. Co.,** Chicago, Ill.  
**Wiley & Russell Mfg. Co.,** Greenfield, Mass.

**Taps, Adjustable—**  
**J. M. Carpenter Tap & Die Co.,** Pawtucket, R. I.

**Lapointe Machine Tool Co.,** Hudson, Mass.

**Taps and Dies—**  
 (See Stocks, Taps and Dies.)

**Taps and Drills—**  
**Charles H. Besly & Co.,** 15-21 S. Clinton St., Chicago, Ill.

**Butterfield & Co.,** Derby Line, Vt.  
**Cleveland Twist Drill Co.,** Cleveland, O.

**Goodell-Pratt Co.,** Greenfield, Mass.  
**Manning, Maxwell & Moore, Inc.,** 85 Liberty St., New York.

**Morse Twist Drill & Machine Co.,** New Bedford, Mass.

**Niles-Bement-Pond Co.,** 111 Broadway, New York.

**Pratt & Whitney Co.,** Hartford, Ct.  
**Standard Tool Co.,** Cleveland, O.

**Wells Bros. Co.,** Greenfield, Mass.  
**Whitman & Barnes Mfg. Co.,** Chicago, Ill.

**Wiley & Russell Mfg. Co.,** Greenfield, Mass.

**Taps and Reamers, Pipe—**  
**Charles H. Besly & Co.,** 15-21 S. Clinton St., Chicago, Ill.

**Butterfield & Co.,** Derby Line, Vt.  
**S. W. Card Mfg. Co.,** Mansfield, Mass.

**J. M. Carpenter Tap & Die Co.,** Pawtucket, R. I.  
**Landis Machine Co.,** Waynesboro, Pa.

**Manning, Maxwell & Moore, Inc.,** 85 Liberty St., New York.

**Morse Twist Drill & Machine Co.,** New Bedford, Mass.

**Niles-Bement-Pond Co.,** 111 Broadway, New York.

**Pratt & Whitney Co.,** Hartford, Ct.  
**E. F. Reece Co.,** Greenfield, Mass.

**D. Saunders' Sons,** Yonkers, N. Y.

**Standard Tool Co.,** Cleveland, O.  
**Walworth Mfg. Co.,** Boston, Mass.

**Wells Bros. Co.,** Greenfield, Mass.  
**Whitman & Barnes Mfg. Co.,** Chicago, Ill.

**Wiley & Russell Mfg. Co.,** Greenfield, Mass.

**Taps, Blacksmiths'—**  
**Morse Twist Drill & Machine Co.,** New Bedford, Mass.

**Whitman & Barnes Mfg. Co.,** Chicago, Ill.

**Taps, Boiler Maker—**  
 (See Taps.)

**Taps, Champagne—**  
**Erie Specialty Co.,** Erie, Pa.

**Landers, Frary & Clark,** New Britain, Ct.

**Taps, Collapsible and Adjustable—**  
**Geometric Tool Co.,** New Haven, Ct.

**Taps, Hand—**  
 (See Taps.)

**Taps, Hob or Master—**  
 (See Taps.)

**Taps, Inserted Blade Gas Pipe—**  
**W. H. Nicholson & Co.,** Wilkes-Barre, Pa.

**Taps, Machine—**  
 (See Taps.)

**Taps, Machine Screw—**  
 (See Taps.)

**Taps, Nut—**  
 (See Taps.)

**Taps, Patch Bolt—**  
 (See Taps.)

**Taps, Pipe—**  
 (See Taps.)

**Taps, Pulley—**  
 (See Taps.)

**Taps, Spindle—**  
 (See Taps.)

**Taps, Stay Bolt—**  
 (See Taps.)

**Taps, Stove Bolt—**  
 (See Taps.)

**Taps, Tapper—**  
 (See Taps.)

**Tar Furnaces—**  
 (See Furnaces, Portable, &c.)

**Tar Paper Saturating Machines—**  
 (See Saturating Machines for Tar Paper.)

**Targets, Shooting Gallery—**  
**Arcade Mfg. Co.,** Freeport, Ill.

**Tea Bells, Kettles, &c.—**  
 (See Bells, Kettles, &c.)

**Tees—**  
 (See Angles and Tees.)

**Teeth, Cider Mill—**  
**Shelton Co.,** Shelton, Ct.

**Teeth, Coal Breaker—**  
**Keystone Drop Forge Works,** Chester, Pa.

**Kilbom & Bishop Co.,** New Haven, Ct.

**Teeth, Harrow—**  
**Bancroft & Co.,** Philadelphia, Pa.

**Inland Steel Co.,** First National Bank Bldg., Chicago, Ill.

**M. Lanz & Sons,** Pittsburgh, Pa.

**Oliver Iron & Steel Co.,** Pittsburgh, Pa.

**Republic Iron & Steel Co.,** Pittsburgh, Pa.

**Teeth, Hay Loading—**  
**W. D. Gibson Co.,** Huron and Kingsbury Sts., Chicago, Ill.

**Raymond Mfg. Co.,** Corry, Pa.

**Teeth, Mining Machine—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.

**Teeth, Rake—**  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

**Teeth, Threshing Machine—**  
Cambria Forge Co., Johnstown, Pa.  
Keystone Drop Forge Works, Chester, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
Rhode Island Tool Co., Providence, R. I.  
Transue & Williams Co., Alliance, O.

**Telegraph and Telephone Goods—**

Crosby Co., Buffalo, N. Y.  
Holtzer-Cabot Electric Co., Boston, Mass.  
Hubbard & Co., Pittsburgh, Pa.  
John R. Keim Mills, Inc., Buffalo, N. Y.  
Kilborn & Bishop Co., New Haven, Ct.  
M. Lanz & Sons, Pittsburgh, Pa.  
W. R. Ostrander & Co., 22 Dey St., New York.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Telegraph and Telephone Pole Line Equipment—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Hubbard & Co., Pittsburgh, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
M. Lanz & Sons, Pittsburgh, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Star Expansion Bolt Co., 147-149 Cedar St., New York.

**Telegraph and Telephone Pole Supplies (Pins, Brackets, Cross Arms, Cleats, Cross Arm Braces, Steps, &c.)—**

American Iron & Steel Mfg. Co., Lebanon, Pa.  
Billings & Spencer Co., Hartford, Ct.  
Grabler Mfg. Co., Cleveland, O.  
Hubbard & Co., Pittsburgh, Pa.  
Inland Steel Co., First National Bank Bldg., Chicago, Ill.  
Kilborn & Bishop Co., New Haven, Ct.  
M. Lanz & Sons, Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
Nicolet Plate Washer Co., 1822-1850 W. Juniata St., Philadelphia, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.  
Richards Mfg. Co., Aurora, Ill.  
Star Expansion Bolt Co., 147-149 Cedar St., New York.  
Strieby & Foot Co., Newark, N. J.

**Telegraph and Telephone Wire—**

(See Wire, Telephone and Telegraph.)  
**Telegraph Pole Spoons—**  
(See Shovels, Spades and Spoons, Pole Hole.)

**Telephone and Telegraph Goods—**

(See Telegraph and Telephone Goods.)  
**Telephone Bells—**  
(See Bells, Telephone.)

**Telephone Parts—**  
Boston Pressed Metal Co., Worcester, Mass.

Crosby Co., Buffalo, N. Y.  
Holtzer-Cabot Electric Co., Boston, Mass.

**Telephones—**  
Holtzer-Cabot Electric Co., Boston, Mass.

**Telescopes, Rifle and Pistol—**  
J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

**Temperature Recording Instruments—**  
(See Recording Instruments, Temperature, also Thermometers.)

**Tempering Compounds—**  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

**Tempering, to Order—**  
Wallace Barnes Co., Bristol, Ct.

**Tennis Court Rollers—**  
(See Rollers, Polo and Tennis.)

**Ten Pins and Balls—**  
(See Balls and Pins.)

**Tenderers, Meat—**  
(See Pounders, Steak.)

**Tenon Machines, Spoke—**  
(See Spoke Tenon Machines.)

**Tenoning Machines—**  
Oliver Machinery Co., Grand Rapids, Mich.

**Tension Carriages, Rope Transmission—**

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.  
W. E. Caldwell Co., Inc., Louisville, Ky.  
Jeffrey Mfg. Co., Columbus, O.

**Tent Cots—**  
(See Cots, Tent.)

**Terminals, Cable, Seamless Copper—**

Holtzer-Cabot Electric Co., Boston, Mass.

**Terne Plate—**  
(See Plate, Tin and Terne.)

**Testers, Center—**  
J. T. Slocumb Co., Providence, R. I.  
L. S. Starrett Co., Athol, Mass.

**Testers, Flour—**  
E. C. Atkins & Co., Indianapolis, Ind.

**Testers, Grain—**  
W. J. Clark Co., Salem, O.

**Testers, Pressure Gauge—**  
Ashton Valve Co., Boston, Mass.

**Testing Bureau, Rails and Railway Material—**

Robert W. Hunt & Co., 90 West St., New York.

**Testing Laboratories, Physiological—**

Henry Souther Engineering Co., Hartford Ct.

**Testing Machines, Bench Center—**

Morse Twist Drill & Machine Co., New Bedford, Mass.

**Testing Machines, Metal—**  
United Engineering & Foundry Co., Pittsburgh, Pa.

**Testing Machines, Pipe—**  
Taylor-Wilson Co., McKees Rocks, Pa.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Testing Presses, Pipe—**

Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Watson-Stillman Co., 50 Church St., New York.

**Testing Sets, Electric—**

Electric Controller & Mfg. Co., Cleveland, O.

General Electric Co., Schenectady, N. Y.  
Holtzer-Cabot Electric Co., Boston, Mass.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Tests, Drop—**

Case Crane Co., Columbus, O.

Morgan Engineering Co., Alliance, O.

Whiting Foundry Equipment Co., Harvey, Ill.

**Textile Machinery—**

Dodge Mfg. Co., Mishawaka, Ind.

Mossberg Wrench Co., Central Falls, R. I.  
Schuchardt & Schutte, 90 West St., N. Y.

Taylor & Fenn Co., Hartford, Ct.

**Thermit Process Welding**

**Iron and Steel—**

Goldschmidt Thermit Co., 90 West St., New York.

**Thermometers—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

Edward Brown & Son, 311½ Walnut St., Philadelphia, Pa.

Crosby Steam Gauge & Valve Co., Boston.

**Thermometers, Feed Water—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

**Thermometers, Recording—**

Bristol Co., Waterbury, Ct.  
Edward Brown & Son, 311 Walnut St., Philadelphia, Pa.

**Thermometers, Silver**

**Plated—**

International Silver Co., Meriden, Ct.

**Thermostats—**

W. B. Ostrander & Co., 22 Dey St., New York.

**Thimbles and Hooks—**

(See Hooks and Thimbles.)

**Thimbles and Rings, Stove Pipe—**

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

S. Cheney & Son, Manlius, N. Y.  
Ohio Stove Pipe & Mfg. Co., New Philadelphia, O.

**Thimbles, Gay—**

M. Lanz & Sons, Pittsburgh, Pa.  
Thomas Laughlin Co., Portland, Me.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Thimbles, Rope—**

Broderick & Bascom Rope Co., St. Louis.  
Covert Mfg. Co., Troy, N. Y.

M. Lanz & Sons, Pittsburgh, Pa.  
Thomas Laughlin Co., Portland, Me.

A. Leschen & Sons Rope Co., St. Louis.  
C. M. Mockbee, Cincinnati, O.

Oliver Iron & Steel Co., Pittsburgh, Pa.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

Williamsport Wire Rope Co., Williamsport, Pa.

**Thimbles, Sewing—**

Scovill Mfg. Co., Waterbury, Ct.

**Thimbles, Stove Pipe—**

Lasher Mfg. Co., Davenport, Ia.

**Thread Rolling Machines, Screw—**

Acme Machinery Co., Cleveland, O.  
Blake & Johnson Co., Waterbury, Ct.

E. J. Manville Machine Co., Waterbury, Ct.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Thread Rolling Machines, Sheet Metal—**

E. W. Bliss Co., Brooklyn, N. Y.

**Threaders and Pointers, Wood Screw—**

Asa S. Cook Co., Hartford, Ct.

**Threaders, Automatic Bolt—**

Acme Machinery Co., Cleveland, O.  
National Machinery Co., Tiffin, O.

**Threaders, Bicycle Spoke—**

Blake & Johnson Co., Waterbury, Ct.  
Geometric Tool Co., New Haven, Ct.

Goodell-Pratt Co., Greenfield, Mass.  
E. J. Manville Machine Co., Waterbury, Ct.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

Webster & Perks Tool Co., Springfield, O.

**Threaders, Bolt—**

Acme Machinery Co., Cleveland, O.  
Blake & Johnson Co., Waterbury, Ct.

Asa S. Cook Co., Hartford, Ct.  
Detrick & Harvey Machine Co., Baltimore, Md.

Landis Machine Co., Waynesboro, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

E. J. Manville Machine Co., Waterbury, Ct.

National Machinery Co., Tiffin, O.  
Niles-Bement-Pond Co., 111 Broadway, New York.

Pratt & Whitney Co., Hartford, Ct.  
E. F. Reece Co., Greenfield, Mass.

Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

Webster & Perks Tool Co., Springfield, O.  
Wells Bros. Co., Greenfield, Mass.

Wiley & Russell Mfg. Co., Greenfield, Mass.

**Threaders, Lag Screw—**

Blake & Johnson Co., Waterbury, Ct.  
Asa S. Cook Co., Hartford, Ct.

Landis Machine Co., Waynesboro, Pa.  
National Machinery Co., Tiffin, O.

**Threaders, Pipe—**

Bignall & Keeler Mfg. Co., Edwardsville, Ill.

Landis Machine Co., Waynesboro, Pa.  
Loew Mfg. Co., Cleveland, O.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

National Machinery Co., Tiffin, O.  
Stoever Foundry & Mfg. Co., Myerstown, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Walworth Mfg. Co., Boston, Mass.  
Wiley & Russell Mfg. Co., Greenfield, Mass.

**Threaders, Wagon Skeln—**

Acme Machinery Co., Cleveland, O.  
Landis Machine Co., Waynesboro, Pa.

Webster & Perks Tool Co., Springfield, O.

**Threading and Cutting Machines, Pipe—**  
(See Pipe Cutting and Threading Machines.)

**Threading Lathes—**  
(See Lathes, Automatic Screw Threading.)

**Threading Machines, Lag and Coach Screw—**  
Blake & Johnson Co., Waterbury, Ct.

**Threading Machines, Nipple—**  
Detrick & Harvey Machine Co., Baltimore, Md.

**Threading Machines, Sheet Metal—**  
Consolidated Press & Tool Co., Hastings, Mich.

Ferracute Machine Co., Bridgeton, N. J.

**Threading Tools—**  
(See Tools, Thread Cutting Lathe.)

**Threshing Machine Teeth—**  
(See Teeth, Threshing Machine.)

**Thumb Nut and Screw Blanks—**  
(See Blanks.)

**Thumb Nuts, Screws—**  
(See Nuts, Screws.)

**Ticket Dating Stamps—**  
(See Stamps, Dating.)

**Ticket Hooks—**  
(See Hooks, Ticket.)

**Tickets, Metal Fare—**  
American Railway Supply Co., 24 Park Place, New York.

**Tie Plates—**  
(See Plates, Tie.)

**Tie Rods—**  
(See Rods, Tie.)

**Tie Tongs, Plate Swages, Ping Punches—**  
(See Tools, Railroad Track.)

**Ties, Bale—**  
Acme Steel Goods Co., 2834-2840 Archer Ave., Chicago, Ill.  
American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
Griswold Co., Sterling, Ill.  
Griswold Wire Co., Braddock, Pa.

**Ties, Cattle and Horse—**  
Covert Mfg. Co., Troy, N. Y.  
Onaida Community, Kenwood, N. Y.  
Standard Chain Co., Pittsburgh, Pa.  
Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.

**Ties, Cotton—**  
American Tube & Stamping Co., Bridgeport, Ct.

Carnegie Steel Co., Pittsburgh, Pa.  
Pittsburgh Steel Co., Pittsburgh, Pa.

**Ties, Livery—**  
Covert Mfg. Co., Troy, N. Y.

**Ties, Steel, for Industrial Works, Mines, Plantations, &c.—**

Avery Stamping Co., Cleveland, O.  
Arthur Koppel Co., Pittsburgh, Pa.

**Ties, Steel Railroad—**  
Atlas Car & Mfg. Co., Cleveland, O.

Avery Stamping Co., Cleveland, O.  
Carnegie Steel Co., Pittsburgh, Pa.  
Arthur Koppel Co., Pittsburgh, Pa.  
Luckawanna Steel Co., 2 Rector St., N. Y.  
West Wiener, Church and Fulton Sts., New York.

**Tighteners, Belt—**  
(See Belt Tighteners.)

**Tile Machinery—**  
F. R. Patch Mfg. Co., Rutland, Vt.

**Tile, Oven—**  
J. Gilmour, Bennett Bldg., New York.

**Tiles, Clay Roofing—**  
Henry Maurer & Son, 420 E. 23d St., N. Y.

**Tiles, Metallic Roofing—**  
Merchant & Evans Co., Philadelphia, Pa.

**Tiles, Metallic, Wainscot, Wall, &c.—**

New York Metal Ceiling Co., 537-539 W. 24th St., New York.

**Tiling or Ditching Shovels—**  
(See Shovels and Spades, Tiling or Ditching.)

**Tiling, Rubber, Interlocking—**

New York Belting & Packing Co., 91-93 Chambers St., New York.

**Tiling, Steel Floor—**  
American Tube & Stamping Co., Bridgeport, Ct.

**Timber Construction—**  
Baltimore Bridge Co., Baltimore, Md.

**Timber Dollies, Scribes, Stirrups, &c.—**  
(See Dollies, Scribes, Stirrups, &c.)

**Timber Grapples—**  
(See Irons, Grappling.)

**Timber Unloaders—**  
Soule Steam Feed Works, Meridian, Miss.

**Time Checks—**  
(See Checks.)

**Time Detectors—**  
(See Clocks, Watchman's.)

**Time Detectors, Employees—**  
(See Clocks, Watchman's.)

**Time Recorders, Electrical—**

Bristol Co., Waterbury, Ct.

**Time Recorders, Mechanical—**

Bristol Co., Waterbury, Ct.

**Tin—**  
American Metal Co., 52 Broadway, N. Y.

Empire Metal Co., Syracuse, N. Y.

Arthur C. Harvey Co., Boston, Mass.

Hendricks Bros., 49 Cliff St., New York.

Theo. Hiertz Metal Co., St. Louis, Mo.

Merchant & Evans Co., Philadelphia, Pa.

Pittsburgh White Metal Co., Pittsburgh, Pa.

Waite, Ranlet & Co., Boston, Mass.

Walsh's Sons & Co., Newark, N. J.

**Tin Boxes, Pails, &c.—**  
(See Boxes, Pails, &c.)

**Tin, Continuous Roofing—**  
(See Roofing in Rolls.)

**Tin Foil Rolling Mills—**  
(See Mills for Rolling Tin Foil.)

**Tin, Perforated—**

Erdle Perforating Co., Rochester, N. Y.

Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.

Manhattan Perforated Metal Co., 237 Centre St., New York.

Chas. Mundt & Sons, 441-447 Pearl St., New York.

**Tin, Phosphor—**  
Crescent Phosphorized Metal Co., Philadelphia, Pa.

Empire Metal Co., Syracuse, N. Y.

**Tin Plate—**

(See Plate, Tin and Terne.)

**Tin Plate Machinery—**

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
Fawcuss Machine Co., Pittsburgh, Pa.  
A. Garrison Foundry Co., Pittsburgh, Pa.  
Hyde Park Foundry & Machine Co., Hyde Park, Pa.  
Mesta Machine Co., Pittsburgh, Pa.  
R. S. Newbold & Son Co., Norristown, Pa.  
Philadelphia Roll & Machine Co., 23d St. & Washington Ave., Philadelphia, Pa.  
Poole Engineering & Machine Co., Baltimore, Md.  
Wm. Swindell & Bro., Pittsburgh, Pa.

**Tin Plates, Dair—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

**Tin, Roofing—**

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

**Tin, Taggers—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

**Tincture Presses—**

(See Presses, Tincture.)

**Tinned Sheets, Large Size—**

American Sheet and Tin Plate Co., Pittsburgh, Pa.

**Tinners' and Plumbers' Furnaces—**

(See Furnaces, Plumbers' and Tinners'.)

**Tinners' Rules, Shears,**

**Snips, Stakes—**

(See Rules, Shears, Snips, Stakes.)

**Tinners' Tools and Machines—**

Badger State Machine Co., Janesville, Wis.  
Ferracute Machine Co., Bridgeton, N. J.  
Merchant & Evans Co., Philadelphia, Pa.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
George A. Ohl & Co., Newark, N. J.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Tinners' Trimmings (Ash Can Handles, Boiler Handles)—**

Arcade Mfg. Co., Freeport, Ill.  
Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.  
Columbia Grey Iron Co., Columbia, Pa.  
E. Phillips & Son, South Hanover, Mass.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Tinning—**

Avery Stamping Co., Cleveland, O.  
Cleveland Galvanizing Works Co., Cleveland, O.

Dover Stamping & Mfg. Co., Cambridge, Mass.

Gem Mfg. Co., Boston, Mass.

Geuder, Paeschke & Frey Co., Milwaukee, Wis.

Haven Malleable Castings Co., Cincinnati, O.

E. Phillips & Sons, So. Hanover, Mass.

Wright Wire Co., Worcester, Mass.

**Tinning Machines—**

R. S. Newbold & Son Co., Norristown, Pa.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.

**Tinware, Butchers'—**

Sturges & Burn Mfg. Co., Chicago, Ill.

**Tinware, Galvanized Ware,**

**Railroad and Mine—**

Johnson Mfg. Co., Urbana, O.

**Tinware, Heavy, to Order—**

Johnson Mfg. Co., Urbana, O.

**Tinware Machinery—**

Adriance Machine Works, Brooklyn, N.Y.  
E. W. Bliss Co., Brooklyn, N. Y.  
Consolidated Press & Tool Co., Hastings, Mich.

Ferracute Machine Co., Bridgeton, N. J.

A. Garrison Foundry Co., Pittsburgh, Pa.

Niagara Machine & Tool Works, Buffalo, N. Y.

George A. Ohl & Co., Newark, N. J.

F. B. Shuster Co., New Haven, Ct.

Zeh & Hahnemann Co., Newark, N. J.

**Tinware, Pieced and Stamped—**

Dover Stamping & Mfg. Co., Cambridge, Mass.

Geuder, Paeschke & Frey Co., Milwaukee, Wis.

Lalance & Grosjean Mfg. Co., 299 Broadway, New York.

**Tipplers, Coal—**

Brown Hoisting Machinery Co., Cleveland, O.

Interstate Engineering Co., Bedford, O.

Jeffrey Mfg. Co., Columbus, O.

Meehan Bolter & Construction Co., Louisville, O.

Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

**Tips and Fenders, Rubber—**

H. O. Canfield Co., Bridgeport, Ct.

New York Belting & Packing Co., 91-93 Chambers St., New York.

**Tips, Chair and Crutch—**

Elastic Tip Co., Boston, Mass.

New York Belting & Packing Co., 91-93 Chambers St., New York.

**Tips, Fishing Rod—**

Horton Mfg. Co., Bristol, Ct.

**Tips, Hame—**

Walter R. Woodruff & Sons Co., Mt. Carmel, Ct.

**Tips, or Sockets, Shaft,**

Yoke, Pole and Whimble-tree—

Boston Pressed Metal Co., Worcester, Mass.

Sparks-Withington Co., Ltd., Jackson, Mich.

Walter W. Woodruff & Sons Co., Mount Carmel, Ct.

**Tips, Screw—**

Elastic Tip Co., Boston, Mass.

**Tire Benders, Bolts, &c.—**

(See Benders, Bolts, &c.)

**Tire Measuring Wheels—**

(See Wheels, Tire Measuring.)

**Tire Shrinkers—**

Champion Blower & Forge Co., Lancaster, Pa.

**Tires, Baby Cab, Rubber—**

Springfield Tire & Rubber Co., Springfield, O.

**Tires, Car and Locomotive—**

Carnegie Steel Co., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., New York.

**Tires, Steel—**

Thomas Prosser & Son, 26 Platt St., New York.

Standard Welding Co., Cleveland, O.

**Toasters—**

Andrews Wire & Iron Works, Rockford, Ill.

Fred J. Meyers Mfg. Co., Hamilton, O.

Parker Wire Goods Co., Worcester, Mass.

Schneider & Trenkamp Division, American

Stove Co., Cleveland, O.

Standard Wire Co., New Castle, Pa.

(See also Kitchen Articles, Wire.)

**Toasters, Omelet Chafing Dish—**

New York Stamping Co., Brooklyn, N. Y.

**Tobacco Cutters, &c.—**

(See Cutters, &c.)

**Toe Calks—**

(See Calks.)

**Toilet Clippers—**

(See Clippers, Horse and Toilet.)

**Tokens, Metal—**

American Railway Supply Co., 24 Park Place, New York.

**Tomato Guards—**

(See Guards, Flower and Tomato.)

**Tongs—**

(See Shovels, Tongs, Pokers, Fire Sets, &c.)

**Tongs, Blacksmiths'—**

Heller Bros. Co., Newark, N. J.

**Tongs, Carbon—**

Billings & Spencer Co., Hartford, Ct.

**Tongs, Coal—**

Peck, Stow & Wilcox Co., 27 Murray St., New York.

Reading Hardware Co., Reading, Pa.

Russell & Erwin Mfg. Co., 94-98 Lafayette St., New York.

**Tongs, Crucible—**

Byram & Co., Inc., Detroit, Mich.

S. Obermayer Co., Cincinnati, O.

J. W. Paxson Co., 1021 N. Delaware Ave., Philadelphia, Pa.

Louis Sacks Foundry Co., Newark, N. J.

**Tongs, Granite Tool—**

Trow & Holden, Barre, Vt.

**Tongs, Ice—**

Gifford-Wood Co., Arlington, Mass.

Hay-Budden Mfg. Co., Brooklyn, N. Y.

Louden Machinery Co., Fairfield, Ia.

& I. J. White Co., Buffalo, N. Y.

**Tongs, Pipe—**

American Well Works, Aurora, Ill.

Jarecki Mfg. Co., Erie, Pa.

Kilborn & Bishop Co., New Haven, Ct.

Manning, Maxwell & Moore, Inc., 85

Liberty St., New York.

D. Saunders' Sons, Yonkers, N. Y.

Trimont Mfg. Co., Roxbury, Mass.

Walworth Mfg. Co., Boston, Mass.

**Tongs, Pipe Hanger—**

Berger Bros. Co., 231 Arch St., Philadelphia, Pa.

**Tongs, Rail—**

Hubbard & Co., Pittsburgh, Pa.

**Tongs, Railroad Tie—**

Hubbard & Co., Pittsburgh, Pa.

**Tongs, Roofing—**

Niagara Machine & Tool Works, Buffalo, N. Y.

Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Tongs, Skidding—**

Verlach Co., Cleveland, O.

**Tongs, Special, for Machinists—**

Barnes Tool Co., New Haven, Ct.

**Tongs, Wire—**

Morgan Construction Co., Worcester, Mass.

**Tool Boxes, Chests, Grinders, Holders—**

(See Boxes, Chests, Grinders, Holders.)

**Tool Makers' Clamps—**

(See Clamps, Tool Makers'.)

**Tool Posts, Lathe—**

(See Posts.)

**Tool Sets—**

(See Sets, Screw Driver and Tool.)

**Tool Sets, Garden—**

(See Sets, Garden Tool.)

**Tool Sets, Hollow Handle—**

(See Sets, Tool, Hollow Handle.)

**Tool Sharpeners, Foot and Hand Power—**

(See Grinders, Foot and Hand Power.)

**Tool Steel Balls—**

(See Balls, Steel.)

**Tools and Supplies, Factory, Railway, &c., Dealers in—**

Cal. Hirsch & Sons Iron & Rail Co.,

St. Louis, Mo.

Irving Mfg. & Tool Co., 157 Chambers St.,

New York.

Manning, Maxwell & Moore, Inc., 85

Liberty St., New York.

Niles-Bement-Pond Co., 111 Broadway,

New York.

Joseph T. Ryerson & Son, 12-22 Milwau-

kee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted

Co., Chicago, Ill.

C. C. Wormer Machinery Co., Detroit,

Mich.

**Tools, Automatic Boring—**

Goodell-Pratt Co., Greenfield, Mass.

Millers Falls Co., 23 Warren St., N. Y.

**Tools, Automobile, Valve Repair—**

E. F. Reece Co., Greenfield, Mass.

**Tools, Belt Fastener—**

Crescent Belt Fastener Co., Inc., 143 E

23d St., New York.

**Tools, Boiler Makers'—**

(See Boiler Makers' Tools.)

**Tools, Boring—**

(See Boring Tools.)

**Tools, Brass Working—**

Blake & Johnson Co., Waterbury, Ct.

Ferracute Machine Co., Bridgeton, N. J.

Manning, Maxwell & Moore, Inc., 85

Liberty St., New York.

E. J. Manville Machine Co., Waterbury, Ct.

Niles-Bement-Pond Co., 111 Broadway

New York

Pratt & Whitney Co., Hartford, Ct.

**Tools, Burring—**

Wells Bros. Co., Greenfield, Mass.

**Tools, Butchers'—**

Jolia Chatillon & Sons, 85 Cliff St., N. Y.

Henry Disston & Sons, Philadelphia, Pa.

Landers, Frary & Clark, New Britain, Ct.

L. & I. J. White Co., Buffalo, N. Y.

**Tools, Carbon—**

Thos. L. Dickinson, 64 Nassau St., N. Y.

**Tools, Carriage Makers'—**

Chapin-Stephens Co., Pine Meadow, Ct.

**Tools, Coal Miners'—**

Hubbard & Co., Pittsburgh, Pa.

**Tools, Compressed Air—**

(See Compressed Air Tools.)

**Tools, Coopers'—**

L. & I. J. White Co., Buffalo, N. Y.

**Tools, Cutting On—**

(See Cutting-Off Tools.)

**Tools, Diamond Pointed—**

American Emery Wheel Works, Providence, R. I.  
Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

N. E. Dickinson, 47 Maiden Lane, N. Y.  
Thos. L. Dickinson, 64 Nassau St., N. Y.  
J. L. Osgood, Buffalo, N. Y.  
Sterling Emery Wheel Mfg. Co., Tiffin, O.  
Vitrified Wheel Co., Westfield, Mass.

**Tools, Diamond Shaping—**

J. L. Osgood, Buffalo, N. Y.

**Tools, Dowel, Pin, &c.—**

Chandler & Farquhar Co., Boston, Mass.  
M. Lanz & Sons, Pittsburgh, Pa.

**Tools, Farm and Garden—**

American Fork & Hoe Co., Cleveland, O.

**Tools, Farriers'—**

Heller Bros. Co., Newark, N. J.

**Tools, Filers' (Cleaners, Handles, Holders, &c.)—**

Nicholson File Co., Providence, R. I.

**Tools, Fillet—**

Cleveland Galvanizing Works Co., Cleveland, O.

**Tools, Floral—**

American Fork & Hoe Co., Cleveland, O.  
Arcade Mfg. Co., Freeport, Ill.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Tools, Glaziers'—**

(See Knives, Putty, Cutters, Glass.)

**Tools, Granite Workers'—**

Trow & Holden, Barre, Vt.

**Tools, Hollow Adjustable—**

Standard Tool Co., Cleveland, O.

**Tools, Ice—**

(See Ice Harvesting Tools.)

**Tools, Jewelers' and Tool Makers'—**

Billings & Spencer Co., Hartford, Ct.  
Hardinge Bros., 1036 Lincoln Ave., Chicago, Ill.

Kilborn & Bishop Co., New Haven, Ct.

Nicholson File Co., Providence, R. I.

L. S. Starrett Co., Athol, Mass.

Utica Drop Forge & Tool Co., Utica, N. Y.

**Tools, Knurling—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

Billings & Spencer Co., Hartford, Ct.

Goodell-Pratt Co., Greenfield, Mass.

Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

Pratt & Whitney Co., Hartford, Ct.

**Tools, Lathe—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Western Tool & Mfg. Co., Springfield, O.

**Tools, Lumber—**

Peter Gerlach Co., Cleveland, O.  
Soule Steam Feed Works, Meridian, Miss.

**Tools, Mining & Picks, Wedges, Scrapers, Bars, &c.—**

Iwan Bros., South Bend, Ind.

**Tools, Opticians'—**

N. E. Dickinson, 47 Maiden Lane, N. Y.  
Thos. L. Dickinson, 64 Nassau St., N. Y.

**Tools, Paper Hangers'—**

Webster & Perks Tool Co., Springfield, O.

**Tools, Parting—**

Dame, Stoddard & Co., Boston, Mass.  
James Swan Co., Seymour, Ct.  
Tuck Mfg. Co., Brockton, Mass.

**Tools, Paving Cutters'—**

Trow & Holden, Barre, Vt.

**Tools, Piano and Organ—**

Irrington Mfg. Co., Irvington, N. J.

**Tools, Planer and Shaper—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

Cincinnati Planer Co., Cincinnati, O.  
Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

O. K. Tool Holder Co., Shelton, Ct.

H. B. Underwood & Co., 1025 Hamilton St., Philadelphia, Pa.

Western Tool & Mfg. Co., Springfield, O.

**Tools, Planer Gang—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

**Tools, Pneumatic—**

(See Compressed Air Tools.)

**Tools, Railroad Track—**

Hubbard & Co., Pittsburgh, Pa.  
Ingersoll-Rand Co., 11 Broadway, N. Y.  
Stow Flexible Shaft Co., 26th and Callowhill Sts., Philadelphia, Pa.

**Tools, Reloading, Cartridge**

Ideal Mfg. Co., New Haven, Ct.  
J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

**Tools, Roofers' and Pavers'—**

F. H. Evans, Brooklyn, N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Tools, Saw—**

E. C. Atkins & Co., Indianapolis, Ind.  
Henry Diston & Sons, Philadelphia, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
New Britain Machine Co., New Britain, Ct.

**Tools, Saw Makers'—**

E. C. Atkins & Co., Indianapolis, Ind.  
Henry Diston & Sons, Philadelphia, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
National Saw Co., Newark, N. J.  
Simonds Mfg. Co., Fitchburg, Mass.

**Tools, Ship Carpenters'—**

L. & I. J. White Co., Buffalo, N. Y.

**Tools, Slaters'—**

Belden Machine Co., New Haven, Ct.  
Niagara Machine & Tool Works, Buffalo, N. Y.

**Tools, Slotting—**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.

**Tools, Special—**

(See Special Machinery.)

**Tools, Thread Cutting—**

S. W. Card Mfg. Co., Mansfield, Mass.  
Krieger Tool & Mfg. Co., 83 W. Randolph St., Chicago, Ill.

**Tools, Thread Cutting Lathe**

Armstrong Bros. Tool Co., 109 N. Francisco Ave., Chicago, Ill.



Billings & Spencer Co., Hartford, Ct.  
 Pratt & Whitney Co., Hartford, Ct.  
 Western Tool & Mfg. Co., Springfield, O.  
 Wiley & Russell Mfg. Co., Greenfield, Mass.

**Tools, Turners'—**  
 L. & I. J. White Co., Buffalo, N. Y.

**Tools, Turret Head—**  
 (See Turret Head Tools.)

**Tools, Turret Lathe—**  
 (See Holders, Tool.)

**Tools, Watchmakers'—**  
 (See Tools, Jewelers' and Tool Makers'.)

**Tools, Well—**  
 (See Well Supplies and Tools.)

**Tools, Wire Crating—**  
 Oliver Machinery Co., Grand Rapids, Mich.

**Tools, Wire Fence—**  
 C. E. Bonner Mfg. Co., Chrisman, Ill.  
 Kilborn & Bishop Co., New Haven, Ct.  
 Utica Drop Forge & Tool Co., Utica, N. Y.

**Tools, Wood Engraving—**  
 Dame, Stoddard & Co., Boston, Mass.

**Tools, Wood Turners'—**  
 Buck Bros., Millbury, Mass.

**Tops, Chimney—**  
 Iwan Bros, South Bend, Ind.  
 Osborn Mfg. Co., Cleveland, O.

**Tops, Cistern—**  
 (See Iron Work Builders'.)

**Tops, Malleable D-Handle—**  
 Avery Stamping Co., Cleveland, O.  
 F. E. Kohler & Co., Canton, O.  
 Piqua Handle & Mfg. Co., Piqua, O.  
 Sparks-Withington Co., Ltd., Jackson, Mich.

**Torches, Alcohol—**  
 Turner Brass Works, Sycamore, Ill.  
**Torches, Gasoline and Oil—**  
 Bridgeport Brass Co., 263 B'way, N. Y.  
 Gem Mfg. Co., Pittsburgh, Pa.  
 Hammer & Co., Branford, Ct.  
 Johnson Mfg. Co., Urbana, O.  
 Maple City Mfg. Co., Monmouth, Ill.  
 Schneider & Trenkamp Division, American Stove Co., Cleveland, O.  
 Turner Brass Works, Sycamore, Ill.

**Torches, Lathe—**  
 Gem Mfg. Co., Pittsburgh, Pa.

**Torches, Welding and Cutting—**  
 Beltzer-Delcampe Welding Co., Bridgeport, Ct.  
 Davis-Bournonville Co., 90 West St., N. Y. New York.

**Tote Boxes—**  
 (See Boxes, Tote.)

**Towers, Cooling—**  
 (See Cooling Towers.)

**Towers, Tank—**  
 W. E. Caldwell Co., Louisville, Ky.  
 Forest City Steel & Iron Co., Cleveland.  
 S. Freeman & Sons Mfg. Co., Racine, Wis.

Interstate Engineering Co., Bedford, O.  
 Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.

Mast-Foos Co., Springfield, O.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

Petroleum Iron Works Co., Sharon, Pa.  
 Wm. B. Scaife & Sons Co., Pittsburgh, Pa.  
 Virginia Bridge & Iron Co., Roanoke, Va.

**Towers, Water—**  
 S. Freeman & Sons Mfg. Co., Racine, Wis.

Kenwood Bridge Co., First National Bank Bldg., Chicago, Ill.

W. N. Kratzer & Co., Pittsburgh, Pa.  
 R. Munroe & Sons Mfg. Corporation, Pittsburgh, Pa.

B. Scaife & Sons Co., Pittsburgh, Pa.

**Toy Banks—**  
 (See Toy Savings Banks.)

**Toy Beds—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Kilbourne Mfg. Co., Troy, N. Y.

**Toy Bomb Exploders—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Carts, Carriages and Wagons—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Columbia Grey Iron Co., Columbia, Pa.

**Toy Chairs—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Coffee Mills—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Cradles—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Engines and Cars—**  
 Columbia Grey Iron Co., Columbia, Pa.  
 Hubley Mfg. Co., Lancaster, Pa.

**Toy Fire Apparatus—**  
 Hubley Mfg. Co., Lancaster, Pa.

**Toy Hammers—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Columbia Grey Iron Co., Columbia, Pa.

**Toy Hatchets—**  
 Arcade Mfg. Co., Freeport, Ill.  
 Columbia Grey Iron Co., Columbia, Pa.

**Toy Ironing Boards—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Kettles—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Lawn Mowers—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Locomotives and Trains—**  
 Hubley Mfg. Co., Lancaster, Pa.

**Toy Mops—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Pile Drivers—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Pumps—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Rakes—**  
 Columbia Grey Iron Co., Columbia, Pa.

**Toy Sad Irons—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Savings Banks—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Saws—**  
 Boston Pressed Metal Co., Worcester, Mass.

Columbia Grey Iron Co., Columbia, Pa.  
 Hubley Mfg. Co., Lancaster, Pa.  
 Reading Hardware Co., Reading, Pa.

**Toy Scales—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Shovels and Spades—**  
 Columbia Grey Iron Co., Columbia, Pa.

**Toy Stoves—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Swings—**  
 Columbia Grey Iron Co., Columbia, Pa.

**Toy Tongs—**  
 Arcade Mfg. Co., Freeport, Ill.

**Toy Tools—**  
Arcade Mfg. Co., Freeport, Ill.  
Columbia Grey Iron Co., Columbia, Pa.

**Top Tops—**  
Arcade Mfg. Co., Freeport, Ill.

**Toys, Iron and Steel—**  
Arcade Mfg. Co., Freeport, Ill.  
Columbia Grey Iron Co., Columbia, Pa.  
Hubley Mfg. Co., Lancaster, Pa.  
Hollman Mfg. Co., Mt. Joy, Pa.  
Susquehanna Casting Co., Wrightsville, Pa.

**Trace Chains—**  
(See Chains, Trace.)

**Trace Lap Loops—**  
(See Links, Repair and Lap.)

**Tracing Wheels—**  
(See Wheels, Tracing.)

**Track Bolts, Gauges—**  
(See Bolts, Gauges.)

**Track, Cast Iron, Industrial—**  
Ernst Wiener Co., Church and Fulton Sts., New York.

**Track, Door Hanger—**  
(See Rail, Door.)

**Track, Industrial—**  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Byram & Co., Inc., Detroit, Mich.  
Indianapolis Switch & Frog Co., Springfield, O.

Arthur Koppel Co., Pittsburgh, Pa.  
Northern Engineering Works, Detroit, Mich.

Shannon Engineering & Contracting Co., Pittsburgh, Pa.

Ernst Wiener Co., Church and Fulton Sts., New York.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Track, Overhead Carrying—**  
Atlas Car & Mfg. Co., Cleveland, O.  
Brown Hoisting Machinery Co., Cleveland, O.

Byram & Co., Detroit, Mich.  
Case Crane Co., Columbus, O.

Ed. Harrington, Son & Co., Inc., Philadelphia, Pa.

Interstate Engineering Co., Bedford, O.  
Louden Machinery Co., Fairfield, Ia.

McCabe Hanger Mfg. Co., 425-427 W. 25th St., New York.

F. E. Myers & Bro., Ashland, O.  
Ney Mfg. Co., Canton, O.

Niles-Bement-Pond Co., 111 Broadway, New York.

Northern Engineering Works, Detroit, Mich.

Richards Mfg. Co., Aurora, Ill.  
Wm. B. Scaife & Sons Co., Pittsburgh, Pa.

Shannon Engineering & Contracting Co., Pittsburgh, Pa.

J. G. Speidel, Reading, Pa.  
Whiting Foundry Equipment Co., Harvey, Ill.

Whitman & Barnes Mfg. Co., Chicago, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Track, Portable—**  
Byram & Co., Detroit, Mich.

Indianapolis Switch & Frog Co., Springfield, O.

Arthur Koppel Co., Pittsburgh, Pa.  
Northern Engineering Works, Detroit, Mich.

Whiting Foundry Equipment Co., Harvey, Ill.

Ernst Wiener Co., Church and Fulton Sts., New York.

Yale & Towne Mfg. Co., 9 Murray St., New York.

Youngstown Car Mfg. Co., Youngstown, Ohio.

**Trade Checks—**  
(See Checks, Trade.)

**Trade-Mark Attorneys—**  
(See Patent Attorneys.)

**Trainers, Flower—**  
Dufur & Co., Baltimore, Md.

**Trammels and Trammel Points—**

Henry Disston & Sons, Philadelphia, Pa.  
Stanley Rule & Level Co., New Britain, Ct.

L. S. Starrett Co., Athol, Mass.

**Tramways—**  
(See Track, Overhead Carrying.)

**Tramways, Bridge, Revolving—**

Interstate Engineering Co., Bedford, O.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Tramways, Wire Rope—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Broderick & Bascom Rope Co., St. Louis.

Brown Hoisting Machinery Co., Cleveland, O.

Jeffrey Mfg. Co., Columbus, O.

A. Leschen & Sons Rope Co., St. Louis.

Lidgerwood Mfg. Co., 96 Liberty St., N.Y.

Shannon Engineering & Contracting Co., Pittsburgh, Pa.

Whiting Foundry Equipment Co., Harvey, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Transfer Tables, Electric—**  
(See Transfer Tables, Railroad.)

**Transfer Tables, Railroad—**  
Brown Hoisting Machinery Co., Cleveland, O.

Cleveland Crane & Engineering Co., Wickliffe, O.

Cleveland Punch & Shear Works Co., Cleveland, O.

Industrial Works, Bay City, Mich.

Interstate Engineering Co., Bedford, O.

Morgan Engineering Co., Alliance, O.

Northern Engineering Works, Detroit, Mich.

Pennsylvania Engineering Works, New Castle, Pa.

Whiting Foundry Equipment Co., Harvey, Ill.

**Transformers, Electric—**

Crocker-Wheeler Co., Ampere, N. J.

Fort Wayne Electric Works, Fort Wayne, Ind.

General Electric Co., Schenectady, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Transits—**

Keuffel & Esser Co., 127 Fulton St., N.Y.

L. S. Starrett Co., Athol, Mass.

**Transmission Cable, Flat—**  
(See Flat Cable for Mine Hoisting.)

**Transmission Machinery, Electric Power—**  
General Electric Co., Schenectady, N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Transmission, Rope—**  
(See Rope Transmission.)

**Transmitters, Telephone—**  
(See Telephone Parts.)

**Transom Catches, Centers, Lifters—**  
(See Catches, Centers, Lifters.)

**Trap Door Hinges—**  
(See Hinges, Trap Door.)

**Trap Wrenches—**  
(See Wrenches, Trap.)

**Traps, Crab—**  
Kilbourne Mfg. Co., Troy, N. Y.

**Traps, Fly—**  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Parker Wire Goods Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.

**Traps, Game—**  
Oneida Community, Kenwood, N. Y.  
Peck, Stow & Wilcox Co., 27 Murray St., New York.

**Traps, Plumbing—**  
Ireland & Matthews Mfg. Co., Detroit, Mich.

**Traps, Rat and Mouse—**  
Burditt & Williams Co., Boston, Mass.  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Estey Wire Works Co., 59 Fulton St., New York.

Kilbourne Mfg. Co., Troy, N. Y.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Oneida Community, Kenwood, N. Y.  
Parker Wire Goods Co., Worcester, Mass.  
Smith & Egge Mfg. Co., Bridgeport, Ct.  
Wire Goods Co., Worcester, Mass.

**Traps, Sewer—**  
Bethlehem Foundry & Machine Co., So. Bethlehem, Pa.

A. W. Findlay Co., Inc., 23d and Market Sts., Philadelphia, Pa.  
Goulds Mfg. Co., Seneca Falls, N. Y.  
National Tube Company, Pittsburgh, Pa.

**Traps, Steam—**  
American Blower Co., Detroit, Mich.  
Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.  
Bayley Mfg. Co., Milwaukee, Wis.  
Boston Blower Co., Hyde Park, Mass.  
Eynon-Evans Mfg. Co., 1507 Clearfield St., Philadelphia, Pa.

Jenkins Bros., 71 John St., New York.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Mason Regulator Co., Boston, Mass.  
Morehead Mfg. Co., Detroit, Mich.  
National Tube Company, Pittsburgh, Pa.  
W. H. Nicholson & Co., Wilkes-Barre, Pa.  
Frank L. Patterson & Co., 26 Cortlandt St., New York.

R. F. Sturtevant Co., Boston, Mass.  
Walworth Mfg. Co., Boston, Mass.

**Traps, Vacuum—**  
Morehead Mfg. Co., Detroit, Mich.

**Travelers, Boom and Deck—**  
& J. Tiebout, 118 Chambers St., N. Y.

**Tray Fittings, Trunk—**  
J. H. Sessions & Son, Bristol, Ct.

**Trays and Scrapers, Crumb—**  
New York Stamping Co., Brooklyn, N. Y.

**Trays, Card, Children's, Crumb, Spoon, &c., Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Trays, Casting—**  
Byram & Co., Detroit, Mich.

**Trays, Coin—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.

**Trays, Crumb—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.

**Trays, Electric Lamp—**  
W. J. Clark Co., Salem, O.

**Trays, Meat—**  
Stuart & Peterson Co., Burlington, N. J.

**Trays, Metal—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.

New York Stamping Co., Brooklyn, N. Y.  
Riverside Metal Co., Riverside, N. J.

**Trays, Paper and Letter, Wire—**

Andrews Wire & Iron Works, Rockford, Ill.

Kilbourne Mfg. Co., Troy, N. Y.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Standard Wire Co., New Castle, Pa.  
Wire Goods Co., Worcester, Mass.

**Trays, Shop—**  
(See Boxes and Trays, Shop.)

**Trays, Soap, Rubber—**  
Springfield Tire & Rubber Co., Springfield, O.

**Trays, Steaming—**  
W. J. Clark Co., Salem, O.

**Trays, Wheelbarrow—**  
W. J. Clark Co., Salem, O.

**Treads, Star and Step, Rubber—**

New York Belting & Packing Co., 91-93 Chambers St., New York.

**Treads, Stair, Iron—**  
S. Cheney & Son, Manlius, N. Y.  
(See also Plates, Brass Step.)

**Tree Guards—**  
(See Guards, Tree.)

**Trellises, Wire—**  
Anchor Post Iron Works, 27 Cortlandt St., New York.

Buffalo Wire Works Co., Buffalo, N. Y.  
Cyclone Fence Co., Waukegan, Ill.  
Edward Darby & Sons, 233-235 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.  
Estey Wire Works Co., 59 Fulton St., New York.

Forest City Steel & Iron Co., Cleveland, O.

Howard & Morse, 45 Fulton St., N. Y.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Nimmo Fence & Wire Works Co., Norwood, O.

W. S. Tyler Co., Cleveland, O.  
Wright Wire Co., Worcester, Mass.

**Trevois—**  
Wrightsville Hardware Co., Wrightsville, Pa.

**Triangles, Steel—**  
Brown & Sharpe Mfg. Co., Providence, R. I.

Henry Diaston & Sons, Philadelphia, Pa.  
Keuffel & Esser Co., 127 Fulton St., N. Y.

**Triers, Butter and Cheese—**  
American Cutlery Co., Chicago, Ill.  
Dame, Stoddard & Co., Boston, Mass.

**Trimmers, Bent and Straight—**

(See Shears and Scissors.)

**Trimmers, Bolt Head—**  
E. W. Bliss Co., Brooklyn, N. Y.  
Pawtucket Mfg. Co., Pawtucket, R. I.  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Trimmers, Brush and Hedge—**  
Coldwell Lawn Mower Co., Newburgh, N. Y.

**Trimmers, Hedge—**  
(See Trimmers, Brush and Hedge.)

**Trimmers, Lamp—**  
Bridgeport Brass Co., 233 B'way, N. Y.  
H. B. Ives Co., New Haven, Ct.

**Trimmers, Lawn Border—**  
(See Edgers, Turf.)

**Trimmers, Lumber—**  
Lane Mfg. Co., Montpelier, Vt.

**Trimmers, Paper and Photograph—**  
Wm. L. Barrett, Bristol, Ct.

**Trimmers, Spoke—**  
Millers Falls Co., 23 Warren St., N. Y.

**Trimmers, Tacks—**  
(See Tacks, Trimmers.)

**Trimmers, Tree—**  
(See Pruners.)

**Trimmers, Wall Paper—**  
Webster & Perks Tool Co., Springfield, O.

**Trimmers, Wood—**  
Fox Machine Co., Grand Rapids, Mich.  
Lane Mfg. Co., Montpelier, Vt.  
Oliver Machinery Co., Grand Rapids, Mich.

**Trimming, Bag, Box, Case, &c.—**

Baird Machine Co., Oakville, Ct.  
R. C. Jenkinson & Co., Newark, N. J.

**Trimming, Boiler and Engine—**

Wm. Powell Co., Cincinnati, O.

**Trimming, Bottle—**

Baird Machine Co., Oakville, Ct.

**Trimming, Car—**  
(See Locks and Trimmings, Car.)

**Trimming, Car, Brass—**  
H. B. Ives Co., New Haven, Ct.

(See also Locks and Trimmings, Car.)

**Trimming, Fishing Rods—**

Horton Mfg. Co., Bristol, Ct.

**Trimming, Halter—**

Covert Mfg. Co., Troy, N. Y.

**Trimming, Hame—**

North & Judd Mfg. Co., New Britain, Ct.

**Trimming, Ice Box—**

Arcaide Mfg. Co., Freeport, Ill.

**Trimming, Lamp—**  
Plume & Atwood Mfg. Co., Waterbury, Ct.

**Trimming, Lavatory, Brass—**

Turner Brass Works, Sycamore, Ill.

**Trimming, Overall—**  
Baird Machine Co., Oakville, Ct.  
Spencer Wire Co., Worcester, Mass.

**Trimming, Refrigerator—**  
Arcade Mfg. Co., Freeport, Ill.

**Trimming, Shaft Leather—**  
McKinnon Dash Co., Buffalo, N. Y.

**Trimming, Stove—**  
American Tube & Stamping Co., Bridgeport, Ct.

Mathews Mfg. Co., Worcester, Mass.  
H. A. Matthews Mfg. Co., Seymour, Ct.

**Trimming, Strap—**  
Covert Mfg. Co., Troy, N. Y.

**Trimming, Tinner's—**  
(See Tinner's Trimmings.)

**Trimming, Trunk—**  
R. C. Jenkinson & Co., Newark, N. J.  
J. H. Sessions & Son, Bristol, Ct.

**Trolley Carriages, Hoists, Insulators, Poles—**

(See Carriages, Hoists, Insulators, Poles.)

**Trolley Materials, Electrical—**

General Electric Co., Schenectady, N. Y.  
Keystone Drop Forge Works, Chester, Pa.  
Kilborn & Bishop Co., New Haven, Ct.  
Ohio Brass Co., Mansfield, O.

**Trolley Switches—**  
(See Switches, Overhead Tramway.)

**Trolley Wire—**  
(See Wires, Electrical.)

**Trolleys—**  
Armington Electric Hoist Co., Euclid, O.  
Franklin Moore Co., Winnet, Ct.  
Northern Engineering Works, Detroit, Mich.

Richards Mfg. Co., Aurora, Ill.  
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.

Whiting Foundry Equipment Co., Harvey, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Trolleys, Double Bearing Antifriction—**

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Trolleys, Electric Conveying—**

Alliance Machine Co., Alliance, O.  
Armington Electric Hoist Co., Euclid, O.  
Browning Engineering Co., Cleveland, O.  
Cleveland Crane & Engineering Co., Wickliffe, O.

Interstate Engineering Co., Bedford, O.  
Northern Engineering Works, Detroit, Mich.

Shannon Engineering & Contracting Co., Pittsburgh, Pa.

Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.

Whiting Foundry Equipment Co., Harvey, Ill.

Yale & Towne Mfg. Co., 9 Murray St., New York.

**Trolleys, I-Beam—**

Browning Engineering Co., Cleveland, O.  
Brown Hoisting Machinery Co., Cleveland, O.

Chisholm & Moore Mfg. Co., Cleveland, O.  
Cleveland Crane & Engineering Co., Wickliffe, O.

Interstate Engineering Co., Bedford, O.  
Northern Engineering Works, Detroit,  
Mich.

Pawling & Harnischfeger, Milwaukee,  
Wis.

Schuchardt & Schutte, 90 West St., N. Y.  
Shepard Electric Crane & Hoist Co.,  
Montour Falls, N. Y.

J. G. Speidel, Reading, Pa.  
Whiting Foundry Equipment Co., Har-  
vey, Ill.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Trolleys, Plain Rail—**  
Northern Engineering Works, Detroit,  
Mich.

J. G. Speidel, Reading, Pa.  
Whiting Foundry Equipment Co., Har-  
vey, Ill.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Trolleys, Pneumatic—**  
Shepard Electric Crane & Hoist Co.,  
Montour Falls, N. Y.

Whiting Foundry Equipment Co., Har-  
vey, Ill.

**Trolleys, Roller Bearing—**  
Bancroft & Co., Philadelphia, Pa.  
Northern Engineering Works, Detroit,  
Mich.

Pawling & Harnischfeger, Milwaukee,  
Wis.

Shepard Electric Crane & Hoist Co.,  
Montour Falls, N. Y.

Whiting Foundry Equipment Co., Har-  
vey, Ill.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Trolleys, Street Railway—**  
Atlas Car & Mfg. Co., Cleveland, O.  
Bethlehem Foundry & Machine Co.,  
South Bethlehem, Pa.

General Electric Co., Schenectady, N. Y.  
H. D. Nuttall Co., Pittsburgh, Pa.

**Troughs, Cattle—**  
Avery Stamping Co., Cleveland, O.  
W. J. Clark Co., Salem, O.

**Troughs, Conveyor—**  
H. W. Caldwell & Son Co., Western Ave.  
and 11th St., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.  
Interstate Engineering Co., Bedford, O.

Link-Belt Co., Philadelphia, Pa.

**Troughs, Dipping—**  
W. J. Clark Co., Salem, O.

**Troughs, Eave—**  
(See Eave Troughs.)

**Troughs, Kneading and  
Meal—**

Stuart & Peterson Co., Burlington, N. J.

**Troughs, Pig—**  
S. Cheney & Son, Manlius, N. Y.

**Troughs, Poultry—**  
Stuart & Peterson Co., Burlington, N. J.

**Trousers Guards, Hangers,  
Stretchers—**

(See Guards, Hangers, Stretchers.)

**Trowels, Brick and Plaster-  
ing—**

E. C. Atkins & Co., Indianapolis, Ind.  
Geo. H. Bishop & Co., Cincinnati, O.

Henry Disston & Sons, Philadelphia, Pa.  
F. E. Kohler & Co., Canton, O.

National Saw Co., Newark, N. J.

**Trowels, Cementers'—**  
Henry Disston & Sons, Philadelphia, Pa.

**Trowels, Coke—**  
Henry Disston & Sons, Philadelphia, Pa.

**Trowels, Corner—**  
Henry Disston & Sons, Philadelphia, Pa.

**Trowels, Garden—**  
Arcade Mfg. Co., Freeport, Ill.

Avery Stamping Co., Cleveland, O.  
Crosby Co., Buffalo, N. Y.

Henry Disston & Sons, Philadelphia, Pa.  
F. E. Kohler & Co., Canton, O.

Landers, Frary & Clark, New Britain, Ct.  
New York Stamping Co., Brooklyn, N. Y.

**Trowels, Pointing—**  
F. E. Kohler Co., Canton, O.

National Saw Co., Newark, N. J.

**Truck Casters, Wheels—**  
(See Casters, Wheels.)

**Truck Wheels, Rubber Cov-  
ered—**

(See Wheels, Rubber Tired.)

**Trucks, Bag—**  
Boston & Lockport Block Co., East Bos-  
ton, Mass.

Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Syracuse Chilled Plow Co., Syracuse, N. Y.

Warsaw Elevator Co., Warsaw, N. Y.  
Wrightsville Hardware Co., Wrightsville,  
Pa.

**Trucks, Baggage and Ex-  
press—**

Boston & Lockport Block Co., East Bos-  
ton, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

R. W. Whitehurst Co., Norfolk, Va.

**Trucks, Bar Iron, Pipe,  
Rail, &c.—**

Chase Foundry & Mfg. Co., Columbus, O.  
Whiting Foundry Equipment Co., Har-  
vey, Ill.

**Trucks, Barrel—**  
Atlas Car & Mfg. Co., Cleveland, O.

Bateman Mfg. Co., Grenloch, N. J.  
Boston & Lockport Block Co., East Bos-  
ton, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

Kilbourne & Jacobs Mfg. Co., Columbus, O.  
McKinney Mfg. Co., Allegheny, Pa.

Syracuse Chilled Plow Co., Syracuse,  
N. Y.

Warsaw Elevator Co., Warsaw, N. Y.

**Trucks, Basket—**  
Steel Basket Co., Cedar Rapids, Ia.

Warsaw Elevator Co., Warsaw, N. Y.

**Trucks, Bottlers'—**  
Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Box and Case—**  
Boston & Lockport Block Co., East Bos-  
ton, Mass.

Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Brick—**  
Atlas Car & Mfg. Co., Cleveland, O.

Boston & Lockport Block Co., East Bos-  
ton, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Colborne Mfg. Co., 38 E. Indiana St.,  
Chicago, Ill.

Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Northern Engineering Works, Detroit,  
Mich.

Warsaw Elevator Co., Warsaw, N. Y.

Whiting Foundry Equipment Co., Harvey, Ill.

Youngstown Car Mfg. Co., Youngstown, O.

**Trucks, Butchers'—**  
Boston & Lockport Block Co., East Boston, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Car—**  
American Steel Foundries, 42 Broadway, New York.

Youngstown Car Mfg. Co., Youngstown, O.

**Trucks, Coal—**  
Geo. P. Clark Co., Windsor Locks, Ct.

Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Northern Engineering Works, Detroit, Mich.

Whiting Foundry Equipment Co., Harvey, Ill.

Youngstown Car Mfg. Co., Youngstown, O.

**Trucks, Coal Charging—**  
Chase Foundry & Mfg. Co., Columbus, O.

**Trucks, Core Oven—**  
Chase Foundry & Mfg. Co., Columbus, O.

Northern Engineering Works, Detroit, Mich.

Whiting Foundry Equipment Co., Harvey, Ill.

**Trucks, Cotton—**  
Boston & Lockport Block Co., East Boston, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Crate—**  
Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Dry Goods—**  
Boston & Lockport Block Co., East Boston, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Dye House—**  
Chase Foundry & Mfg. Co., Columbus, O.

Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Dry Kiln—**  
American Blower Co., Detroit, Mich.

Atlas Car & Mfg. Co., Cleveland, O.  
Bayley Mfg. Co., Milwaukee, Wis.

Boston Blower Co., Hyde Park, Mass.  
Buffalo Forge Co., Buffalo, N. Y.

Warsaw Elevator Co., Warsaw, N. Y.  
Wickes Bros., Saginaw, Mich.

Wright Wire Co., Worcester, Mass.  
Youngstown Car Mfg. Co., Youngstown, O.

**Trucks, Factory and Mill—**  
Boston & Lockport Block Co., East Boston, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

Fox Machine Co., Grand Rapids, Mich.  
Terrell's Equipment Co., Grand Rapids, Mich.

R. W. Whitehurst Co., Norfolk, Va.  
Youngstown Car Mfg. Co., Youngstown, O.

**Trucks, Flushing, for Carrying Hose—**  
Syracuse Chilled Plow Co., Syracuse, N. Y.

**Trucks, Foundry—**  
Atlas Car & Mfg. Co., Cleveland, O.

Boston & Lockport Block Co., East Boston, Mass.

Eyram & Co., Detroit, Mich.  
Chase Foundry & Mfg. Co., Columbus, O.

Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Northern Engineering Works, Detroit, Mich.

S. Obermayer Co., Cincinnati, O.  
J. W. Paxson Co., Philadelphia, Pa.

Warsaw Elevator Co., Warsaw, N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Whiting Foundry Equipment Co., Harvey, Ill.

Youngstown Car Mfg. Co., Youngstown, O.

**Trucks, Furniture—**  
Chase Foundry & Mfg. Co., Columbus, O.

**Trucks, Garbage—**  
Syracuse Chilled Plow Co., Syracuse, N. Y.

**Trucks, Hand, Third Wheel—**  
Ernst Wiener Co., Church and Fulton Sts., New York.

**Trucks, Hennerly—**  
Chase Foundry & Mfg. Co., Columbus, O.

**Trucks, Hose, Street Flushing—**  
Syracuse Chilled Plow Co., Syracuse, N. Y.

**Trucks, Hospital—**  
Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Hotel—**  
(See Trucks, Store, Warehouse, &c.)

**Trucks, Laundry—**  
Chase Foundry & Mfg. Co., Columbus, O.

Geo. P. Clark Co., Windsor Locks, Ct.  
Syracuse Chilled Plow Co., Syracuse, N. Y.

**Trucks, Log—**  
Chase Foundry & Mfg. Co., Columbus, O.

Lane Mfg. Co., Montpelier, Vt.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Trucks, Mast Head—**  
Boston & Lockport Block Co., East Boston, Mass.

**Trucks, Mill and Lumber—**  
Chase Foundry & Mfg. Co., Columbus, O.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Trucks, Mold Drying and Annealing—**  
Whiting Foundry Equipment Co., Harvey, Ill.

Youngstown Car Mfg. Co., Youngstown, O.

**Trucks, Office or Bank—**  
Boston & Lockport Block Co., East Boston, Mass.

Geo. P. Clark Co., Windsor Locks, Ct.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.

**Trucks, Packing House—**  
Chase Foundry & Mfg. Co., Columbus, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Trucks, Paper Mill—**  
Chase Foundry & Mfg. Co., Columbus, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Trucks, Paper Roll—**  
Boston & Lockport Block Co., East Boston, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Trucks, Platform—**  
Chase Foundry & Mfg. Co., Columbus, O.

Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.

Geo. P. Clark Co., Windsor Locks, Ct.  
R. W. Whitehurst Co., Norfolk, Va.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Trucks, Printers' Form—**  
Boston & Lockport Block Co., East Boston, Mass.

Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Railroad—**  
(See Trucks, Baggage and Express.)

**Trucks, Sheet Metal—**  
Chase Foundry & Mfg. Co., Columbus, O.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Trucks, Starch Factory—**  
Chase Foundry & Mfg. Co., Columbus, O.

**Trucks, Steamboat—**  
(See Trucks, Baggage and Express.)

**Trucks, Steel Car—**  
American Steel Foundries, 42 Broadway, New York.

Colborne Mfg. Co., 38 E. Indiana St., Chicago, Ill.

**Trucks, Store, Warehouse, &c.—**

Arcade Mfg. Co., Freeport, Ill.  
Atlas Car & Mfg. Co., Cleveland, O.  
Boston & Lockport Block Co., East Boston, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

W. J. Clark Co., Salem, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.

McKinney Mfg. Co., Allegheny, Pa.  
Syracuse Chilled Flow Co., Syracuse, N. Y.

Warsaw Elevator Co., Warsaw, N. Y.  
R. W. Whitehurst Co., Norfolk, Va.

Ernst Wiener Co., Church and Fulton Sts., New York.

Youngstown Car Mfg. Co., Youngstown, O.

**Trucks, Stone—**  
Arcade Mfg. Co., Freeport, Ill.

Boston & Lockport Block Co., East Boston, Mass.

Geo. P. Clark Co., Windsor Locks, Ct.  
S. M. Howes Co., Boston, Mass.

Kilbourne & Jacobs Mfg. Co., Columbus, O.  
C. S. Mersick & Co., New Haven, Ct.

Warsaw Elevator Co., Warsaw, N. Y.  
Ernst Wiener Co., Church and Fulton Sts., New York.

**Trucks, Tannery—**  
Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Timber—**  
E. C. Atkins & Co., Indianapolis, Ind.

Atlas Car & Mfg. Co., Cleveland, O.  
Bayley Mfg. Co., Milwaukee, Wis.

Boston & Lockport Block Co., East Boston, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Lane Mfg. Co., Montpelier, Vt.

Warsaw Elevator Co., Warsaw, N. Y.  
Ernst Wiener Co., Church and Fulton Sts., New York.

**Trucks, Tin Plate—**  
Boston & Lockport Block Co., East Boston, Mass.

Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.

Ernst Wiener Co., Church and Fulton Sts., New York.  
Youngstown Car Mfg. Co., Youngstown, O.

**Trucks, Tip—**  
Geo. P. Clark Co., Windsor Locks, Ct.

**Trucks, Transfer Box—**  
Terrell's Equipment Co., Grand Rapids, Mich.

**Trucks, Wire Mill—**  
Chase Foundry & Mfg. Co., Columbus, O.

Morgan Construction Co., Worcester, Mass.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

Ernst Wiener Co., Church and Fulton Sts., New York.

Wright Wire Co., Worcester, Mass.  
Youngstown Car Mfg. Co., Youngstown, O.

(See also Cars, Wire.)

**Trumpets, Firemen's, Silver Plated—**

International Silver Co., Meriden, Ct.  
**Trunk Carriers, Clamps, &c.**

(See Carriers, Clamps, &c.)  
**Trunk Hardware—**

(See Corners, Clamps, Locks, &c.)  
**Trunk Makers' Tools—**

George A. Ohl & Co., Newark, N. J.  
Stow Flexible Shaft Co., 26th & Callowhill Sts., Philadelphia, Pa.

**Truss Bolts—**  
(See Bolts, Bridge and Roof.)

**Trusses, Steel Building and Bridge—**

Carnegie Steel Co., Pittsburgh, Pa.  
Interstate Engineering Co., Bedford, O.

**Try Squares—**  
(See Squares, Try.)

**Tub Ears, Handles, Hoops—**  
(See Ears, Handles, Hoops.)

**Tub Machinery and Tools—**  
Peter Gerlach Co., Cleveland, O.

**Tube Expanders—**  
(See Expanders, Tube.)

**Tube Hole Punches—**  
(See Punches, Hand and Tube Hole.)

**Tube Works Equipment—**  
A. Garrison Foundry Co., Pittsburgh, Pa.

United Engineering & Foundry Co., Pittsburgh, Pa.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Tubes and Parts, Last—**  
Boston Pressed Metal Co., Worcester, Mass.

**Tubes, Boiler—**  
Ellwood Ivins Tube Works, Oak Lane Sta., Philadelphia, Pa.

E. Keeler Co., Williamsport, Pa.  
R. Monroe & Sons Mfg. Corporation, Pittsburgh, Pa.

National Tube Co., Pittsburgh, Pa.  
Phenix Tube Co., Brooklyn, N. Y.

Thomas Prosser & Son, 26 Platt St., N.Y.  
Reliance Tube Co., Ltd., Pittsburgh, Pa.

**MERCHANTS.**  
Bourne-Fuller Co., Cleveland, O.

Eagle Metal & Supply Co., Brooklyn, N. Y.

C. B. Honston & Co., Girard Bldg., Philadelphia, Pa.

McDowell & Co., Allegheny, Pa.  
Pierson & Co., 29 Broadway, New York.

Joseph T. Ryerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.

Scully Steel & Iron Co., 69 N. Halsted St., Chicago, Ill.

**Tubes, Boiler, Charcoal Iron—**  
Reliance Tube Co., Ltd., Pittsburgh, Pa.

**Tubes, Boiler, Iron—**  
National Tube Co., Pittsburgh, Pa.  
Phenix Tube Co., Brooklyn, N. Y.

**Tubes, Boiler, Steel—**  
Phenix Tube Co., Brooklyn, N. Y.  
Reliance Tube Co., Ltd., Pittsburgh, Pa.

**Tubes, Boiler, Wrought Steel—**  
Pierson & Co., 29 Broadway, N. Y.

**Tubes, Brass and Copper Condenser—**  
Bridgeport Brass Co., 253 B'way, N. Y.  
U. T. Hungerford Brass & Copper Co.,  
497-506 Pearl St., New York.

Arthur T. Rutter & Co., 256 Broadway,  
New York.

**Tubes, Combination, Platin-  
um—**  
J. Bishop & Co., Malvern, Pa.

**Tubes, Exhaust—**  
Standard Welding Co., Cleveland, O.

**Tubes, Flexible Steel—**  
T. R. Almond Mfg. Co., Ashburnham,  
Mass.

**Tubes, Glass—**  
Ashton Valve Co., Boston, Mass.

**Tubes, Gold Plated—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubes, Grain Drill, Wire—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

**Tubes, Hydraulic Seamless  
Steel—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

John S. Leng's Son & Co., 33 Murray  
St., New York.

National Tube Co., Pittsburgh, Pa.  
Thomas Prosser & Son, 26 Platt St., N. Y.

**Tubes, Platinum Plated—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubes, Punch—**  
Eyelet Tool Co., Boston, Mass.  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubes, Speaking—**  
W. R. Ostrander & Co., 22 Dey St., N. Y.

**Tubes, Steel, Brazed, Butted,  
Twisted—**

Phenix Tube Co., Brooklyn, N. Y.

**Tubes, Wringer Roll—**  
New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Tubing, Aluminum—**  
Aluminum Co., of America, Pittsburgh, Pa.  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

Arthur T. Rutter & Co., 256 Broadway,  
New York.

**Tubing, Atomizer—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubing, Automobile—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

National Tube Co., Pittsburgh, Pa.  
Standard Welding Co., Cleveland, O.

**Tubing, Bicycle—**  
American Tube & Stamping Co., Bridge-  
port, Ct.

Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

John S. Leng's Son & Co., 33 Murray St.,  
New York.  
National Tube Co., Pittsburgh, Pa.

**Tubing, Brass and Copper—**  
American Tube & Stamping Co., Bridge-  
port, Ct.

Bridgeport Brass Co., 253 B'way, N. Y.  
U. T. Hungerford Brass & Copper Co.,  
497-506 Pearl St., New York.

Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.  
Phenix Tube Co., Brooklyn, N. Y.

Arthur T. Rutter & Co., 256 Broadway,  
New York.

Seymour Mfg. Co., Seymour, Ct.  
Waterbury Brass Co., Waterbury, Ct.  
Whitlock Coil Pipe Co., Hartford, Ct.

**Tubing, Bronze—**  
Bridgeport Brass Co., 253 B'way, N. Y.  
U. T. Hungerford Brass & Copper Co.,  
497-506 Pearl St., New York.

Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

Phenix Tube Co., Brooklyn, N. Y.  
Arthur T. Rutter & Co., 256 Broadway,  
New York.

Seymour Mfg. Co., Seymour, Ct.  
Waterbury Brass Co., Waterbury, Ct.

**Tubing, Cold Drawn,  
Square—**

Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubing, German Silver—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

Arthur T. Rutter & Co., 256 Broadway,  
New York.

Seymour Mfg. Co., Seymour, Ct.

**Tubing, Gold—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubing, High Carbon Steel—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubing, Hypodermic  
Needle—**

Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubing, Nickel—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubing, Platinum—**  
J. Bishop & Co., Malvern, Pa.

Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

**Tubing, Pump, Steel—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

National Tube Co., Pittsburgh, Pa.

**Tubing, Regular and Spec-  
ial Shapes—**

Boston Pressed Metal Co., Worcester,  
Mass.

Phenix Tube Co., Brooklyn, N. Y.

**Tubing, Rubber—**  
H. O. Canfield Co., Bridgeport, Ct.

New York Belting & Packing Co., 91-93  
Chambers St., New York.

**Tubing, Seamless Bronze—**  
Ellwood Ivins Tube Works, Oak Lane  
Sta., Philadelphia, Pa.

Phenix Tube Co., Brooklyn, N. Y.

Arthur T. Rutter & Co., 256 Broadway,  
New York.



**Tubing, Seamless Lead and**

**Tin—**Ellwood Ivins Tube Works, Oak Lane Sta., Philadelphia, Pa.

**Tubing, Seamless Steel—**

American Tube & Stamping Co., Bridgeport, Ct.

Ellwood Ivins Tube Works, Oak Lane Sta., Philadelphia, Pa.

La Belle Iron Works, Steubenville, O.

John S. Leng's Son & Co., 33 Murray St., New York.

National Tube Co., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

Arthur T. Rutter & Co., 256 Broadway, New York.

Standard Welding Co., Cleveland, O.

Whitlock Coil Pipe Co., Hartford, Ct.

**Tubing, Seamless Tool****Steel—**

Ellwood Ivins Tube Works, Oak Lane Sta., Philadelphia, Pa.

Arthur T. Rutter & Co., 256 Broadway, New York.

**Tubing, Silver—**

Ellwood Ivins Tube Works, Oak Lane Sta., Philadelphia, Pa.

**Tubing, Tool Steel, for****Drills—**

Ellwood Ivins Tube Works, Oak Lane Sta., Philadelphia, Pa.

**Tubing, Well—**

Ellwood Ivins Tube Works, Oak Lane Sta., Philadelphia, Pa.

National Tube Co., Pittsburgh, Pa.

**Tubing, Zinc—**

Bridgeport Brass Co., 253 B'way, N. Y.

Waterbury Brass Co., Waterbury, Ct.

**Tubs, Acid—**

(See Acid Tanks, Tubs, &c.)

**Tubs, Bath—**

(See Bathtubs.)

**Tubs, Factory—**

W. J. Clark Co., Salem, O.

**Tubs, Flower and Tree—**

American Woodenware Mfg. Co., Toledo, O.

**Tubs, Foot—**

Dover Stamping & Mfg. Co., Cambridge, Mass.

**Tubs, Hoisting—**

W. J. Clark Co., Salem, O.

C. W. Hurt Co., West New Brighton, N.Y.

Jeffrey Mfg. Co., Columbus, O.

Steel Basket Co., Cedar Rapids, Ia.

Wellman-Seaver-Morgan Co., Cleveland.

Ernst Wiener Co., Church and Fulton Sts., New York.

**Tubs, Ice Cream Packing—**

Alaska Freezer Co., Winchendon, Mass.

**Tubs, Laundry—**

Humphries Mfg. Co., Mansfield, O.

**Tubs, Wash—**

Dover Stamping & Mfg. Co., Cambridge, Mass.

**Tubs, Wire Cleaning—**

Morgan Construction Co., Worcester, Mass.

**Tubular or Split Riveters—**

(See Riveters and Riveting Machines for Tubular, &c.)

**Tumblin' Mills—**

(See Barrels, Tumbling.)

**Tungsten—**

Roesler & Hasslacher Chemical Co., 100

William St., New York.

**Turbine Water Wheels—**

(See Water Wheels.)

**Turbines, Steam—**

De Laval Steam Turbine Co., Trenton, N. J.

General Electric Co., Schenectady, N. Y.

B. F. Sturtevant Co., Boston, Mass.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**Tureens, Silver and Silver****Plated—**

International Silver Co., Meriden, Ct.

**Turf Edgers—**

(See Edgers, Turf.)

**Turnbuckle Tapping Ma-****chines—**

(See Tapping Machines, Turnbuckle.)

**Turnbuckles—**

American Bridge Co. of New York, 30

Church St., New York.

American Iron & Steel Mfg. Co., Lebanon, Pa.

Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

Cleveland City Forge & Iron Co., Cleveland, O.

Detroit Screw Works, Detroit, Mich.

Graham Nut Co., Pittsburgh, Pa.

Samuel Hall's Sons, 229-233 W. 10th St., New York.

W. H. Haskell Mfg. Co., Pawtucket, R. I.

M. Lanz & Sons, Pittsburgh, Pa.

A. Leschen & Sons Rope Co., St. Louis, Mo.

Manning, Maxwell & Moore, Inc., 85

Liberty St., New York.

Merrill Bros., Maspeth, N. Y.

C. M. Mockbee, Cincinnati, O.

Pawtucket Mfg. Co., Pawtucket, R. I.

Pittsburgh Mfg. Co., Pittsburgh, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

Rhode Island Tool Co., Providence, R. I.

Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

Strieby & Foote Co., Newark, N. J.

Upson Nut Co., Cleveland, O.

Williamsport Wire Rope Co., Williamsport, Pa.

**Turnbuckles, Brass and****Galvanized—**

Thomas Laughlin Co., Portland, Me.

W. & J. Tiebout, 118 Chambers St., N. Y.

Wilcox, Crittenden & Co., Inc., Middletown, Ct.

Manning, Maxwell & Moore, Inc., 85

Liberty St., New York.

**Turnbuckles, Screen Door—**

National Mfg. Co., Sterling, Ill.

**Turners, Cake—**

Arcade Mfg. Co., Freeport, Ill.

Kilbourne Mfg. Co., Troy, N. Y.

Landers, Frary & Clark, New Britain, Ct.

**Turners, Paper Calendar****Roll—**

N. E. Dickinson, 47 Maiden Lane, N. Y.

**Turning and Boring Mills—**

(See Mills, Boring and Turning.)

**Turning and Fellow Webs—**

(See Webs, Turning, Fellow, &c.)

**Turning, Wood, to Order—**

John Sommer Faucet Co., Newark, N. J.

Union Hardware Co., Torrington, Ct.

**Turns, Bell—**  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.

**Turns, Cupboard—**  
National Mfg. Co., Sterling, Ill.  
Peck, Stow & Wilcox Co., 27 Murray St.,  
New York.  
Reading Hardware Co., Reading, Pa.  
Russell & Erwin Mfg. Co., 94-98 Lafayette  
St., New York.  
Shelby Spring Hinge Co., Shelby, O.  
Taylor & Boggis Foundry Co., Cleve-  
land, O.

**Turn Tables, Brick and  
Stone Yard—**  
Chase Foundry & Mfg. Co., Columbus, O.

**Turn Tables, Bridge and  
Railroad—**

American Bridge Co. of New York, 39  
Church St., New York.  
Atlas Car & Mfg. Co., Cleveland, O.  
Baltimore Bridge Co., Baltimore, Md.  
Belmont Iron Works, Inc., Philadelphia,  
Boston Bridge Works, Boston, Mass.  
Brown Hoisting Machinery Co., Cleveland,  
Cleveland Crane & Engineering Co.,  
Wickliffe, O.

Interstate Engineering Co., Bedford, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Arthur Koppel Co., Pittsburgh, Pa.  
McClintic - Marshall Construction Co.,  
Pittsburgh, Pa.

Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.  
Northern Engineering Works, Detroit,  
Mich.

Virginia Bridge & Iron Co., Roanoke, Va.  
Whiting Foundry Equipment Co., Harvey,  
Ill.  
Ernst Wiener Co., Church and Fulton  
Sts., New York.

**Turn Tables, Industrial  
Railway—**  
Chase Foundry & Mfg. Co., Columbus, O.

**Turn Tables, Mill—**  
Chase Foundry & Mfg. Co., Columbus, O.

**Turn Tables, Mine—**  
Arthur Koppel Co., Pittsburgh, Pa.  
Northern Engineering Works, Detroit,  
Mich.

Whiting Foundry Equipment Co., Har-  
vey, Ill.

**Turn Tables, Over head  
Tramway—**  
Richards Mfg. Co., Aurora, Ill.

**Turn Tables, Shop—**  
Bethlehem Foundry & Machine Co.,  
Bethlehem, Pa.

Byram & Co., Inc., Detroit, Mich.  
Chase Foundry & Mfg. Co., Columbus, O.  
C. W. Hunt Co., West New Brighton,  
New York.

Arthur Koppel Co., Pittsburgh, Pa.  
Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Northern Engineering Works, Detroit,  
Mich.

Whiting Foundry Equipment Co., Har-  
vey, Ill.

Ernst Wiener Co., Church and Fulton  
Sts., New York.

Yale & Towne Mfg. Co., 9 Murray St.,  
New York.

**Turret Drilling Machines,  
Lathes—**

(See Drilling Machines, Lathes.)  
**Turret Head Tools—**

T. E. Almond Mfg. Co., Ashburnham,  
Mass.

**Tuyere Irons—**  
(See Irons, Tuyere.)

**Tweezers—**  
Schuchardt & Schutte, 90 West St., N. Y.

**Twine, Binder—**  
American Mfg. Co., 65 Wall St., N. Y.

**Twine, Box, Tying—**  
New York Cordage Co., 83-85 Wall St.,  
New York.

**Twine Boxes, Holders—**  
(See Boxes, Holders.)

**Twine, Cotton—**  
Estes Mills, Fall River, Mass.

**Twine, Finished India—**  
American Mfg. Co., 65 Wall St., N. Y.

**Twine, Flax, Hemp, Jute  
and Wool—**

American Mfg. Co., 65 Wall St., N. Y.  
New York Cordage Co., 83-85 Wall St., N. Y.

**Twist Drill Grinding Ma-  
chines—**

(See Grinders, Drill.)  
**Twist Drills—**

(See Drills, Twist.)  
**Type Metal—**

Pittsburgh White Metal Co., Pittsburgh,  
**Typewriters—**

Fox Machine Co., Grand Rapids, Mich.  
**Umbrella Stands, &c.—**

(See Stands.)  
**Underwriters' Wire—**

(See Wires, Electrical.)  
**Union Scales—**

(See Scales, Union.)  
**Unions, Flanged Pipe—**

American Spiral Pipe Works, 48th Ave.  
and 14th St., Chicago, Ill.

Jefferson Union Co., Lexington, Mass.  
National Tube Co., Pittsburgh, Pa.

**Unions, Pipe—**  
Bard Union Co., Norwich, Ct.

E. M. Dart Mfg. Co., Providence, R. I.  
Jefferson Union Co., Lexington, Mass.

Lunkenheimer Co., Cincinnati, O.  
National Tube Co., Pittsburgh, Pa.

Nolte Brass Co., Springfield, O.  
Pittsburgh Valve, Foundry & Construc-  
tion Co., Pittsburgh, Pa.

Wm. Powell Co., Cincinnati, O.  
Walworth Mfg. Co., Boston, Mass.

**Universal Squares—**  
(See Squares, Combination.)

**Unloaders, Hay—**  
F. E. Myers & Bro., Ashland, O.

**Unloaders, Railroad Bal-  
last—**

Lidgerwood Mfg. Co., 96 Liberty St.,  
New York.

**Upholsterers' and Saddlery  
Hammers—**

(See Hammers, Saddlers' and Uphol-  
sterers'.)

**Upholsterers' Regulators—**  
(See Regulators, Upholsterers'.)

**Upholstery and Curtain Fix-  
tures—**

(See Curtain and Upholstery Fixtures.)  
**Upright Pulleys—**

(See Pulleys, Upright.)

**Upsetters, Tire—**

Buffalo Forge Co., Buffalo, N. Y.  
Champion Blower & Forge Co., Lancaster, Pa.

**Upsetting Collars—**

Standard Welding Co., Cleveland, O.

**Upsetting Machines—**

Ajax Mfg. Co., Cleveland, O.  
National Machinery Co., Tiffin, O.  
Williams, White & Co., Moline, Ill.

**Urinals—**

Humphries Mfg. Co., Mansfield, O.

**Urns—**

(See Architectural Sheet Metal Work.)

**Urns, Coffee—**

Landers, Frary & Clark, New Britain, Ct.

**Urns, Coffee and Hot Water,****Electric—**

General Electric Co., Schenectady, N. Y.

**Urns, Stove—**

Mathews Mfg. Co., Worcester, Mass.

**Vacuum Pumps—**

(See Pumps, Compression and Vacuum.)

**Valleys and Gutters, in****Rolls—**

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

Lasher Mfg. Co., Davenport, Ia.

David Lupton's Sons Co., Westmoreland

and Janney Sts., Philadelphia, Pa.

**Valve Discs—**

(See Discs.)

**Valve Packing—**

(See Packing Valve.)

**Valve Stems—**

Indestructible Metal Co., 50 Church

St., New York.

Phosphor Bronze Smelting Co., 2200 Wash-

ington Ave., Philadelphia, Pa.

J. H. Williams & Co., Brooklyn, N. Y.

**Valve Wheels, Steam—**

(See Wheels, Steam Valve.)

**Valves, Air, Water, Gas and****Steam—**

American Steam Gauge & Valve Mfg.

Co., Boston, Mass.

Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.

Ashton Valve Co., Boston, Mass.

Crosby Steam Gauge & Valve Co., Boston.

Eaton-Edwards Mfg. Co., 1507 Clearfield St.,

Philadelphia, Pa.

Hancock Inspirator Co., 85-89 Liberty St.,

New York.

Jarecki Mfg. Co., Erie, Pa.

Jenkins Bros., 71 John St., New York.

Kennedy Valve Mfg. Co., 57 Beekman

St., New York.

Lunkenheimer Company, Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85-89

Liberty St., New York.

R. Munroe & Sons Mfg. Corporation,

Pittsburgh, Pa.

National Tube Co., Pittsburgh, Pa.

Nolte Brass Co., Springfield, O.

Philadelphia Roll & Machine Co., 23d St.

& Washington Ave., Philadelphia.

Pittsburgh Valve, Foundry & Construction

Co., Pittsburgh, Pa.

Wm. Powell Co., Cincinnati, O.

Walworth Mfg. Co., Boston, Mass.

Watson-Stillman Co., 50 Church St.,

New York.

R. D. Wood & Co., 400 Chestnut St.,

Philadelphia, Pa.

**Valves, Ammonia—**

American Steam Gauge & Valve Mfg.

Co., Boston, Mass.

Ashton Valve Co., Boston, Mass.

Jarecki Mfg. Co., Erie, Pa.

Jenkins Bros., 71 John St., New York.

Kennedy Valve Mfg. Co., 57 Beekman

St., New York.

Lunkenheimer Co., Cincinnati, O.

National Tube Co., Pittsburgh, Pa.

**Valves and Plungers, Boat****Pump—**

Berger Bros. Co., 231-237 Arch St., Phila-

delphia, Pa.

**Valves, Armored Pump—**

Power Specialty Co., 111 Broadway, N. Y.

**Valves, Automatic—**

American Steam Gauge & Valve Mfg.

Co., Boston, Mass.

**Valves, Balanced—**

W. E. Caldwell Co., Louisville, Ky.

Kennedy Valve Mfg. Co., 57 Beekman

St., New York.

Mason Regulator Co., Boston, Mass.

Pittsburgh Valve, Foundry & Construc-

tion Co., Pittsburgh, Pa.

**Valves, Bicycle—**

Scovill Mfg. Co., Waterbury, Ct.

**Valves, Blast Furnace—**

Pittsburgh Valve, Foundry & Construc-

tion Co., Pittsburgh, Pa.

**Valves, Blow Off—**

Ashton Valve Co., Boston, Mass.

Chicago Pneumatic Tool Co., Fisher

Building, Chicago, Ill.

Crosby Steam Gauge & Valve Co., Boston.

Consolidated Safety Valve Co., 85-89 Lib-

erty St., New York.

Eaton-Edwards Mfg. Co., 1507 Clearfield St.,

Philadelphia, Pa.

Hancock Inspirator Co., 85-89 Liberty St.,

New York.

Jenkins Bros., 71 John St., New York.

Lunkenheimer Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85-89

Liberty St., New York.

National Tube Co., Pittsburgh, Pa.

Pittsburgh Gauge & Supply Co., Pittsburgh

Pittsburgh Valve, Foundry & Construc-

tion Co., Pittsburgh, Pa.

Wm. Powell Co., Cincinnati, O.

Walworth Mfg. Co., Boston, Mass.

Wickes Bros., Saginaw, Mich.

**Valves, Butterfly—**

Lunkenheimer Co., Cincinnati, O.

Pittsburgh Valve, Foundry & Construc-

tion Co., Pittsburgh, Pa.

**Valves, Check—**

Ashcroft Mfg. Co., 85-89 Liberty St., N. Y.

Consolidated Safety Valve Co., 85-89 Lib-

erty St., New York.

W. & B. Douglas, Middletown, Ct.

Eaton-Edwards Mfg. Co., 1517 Clearfield St.,

Philadelphia, Pa.

Goulds Mfg. Co., Seneca Falls, N. Y.

Hancock Inspirator Co., 85-89 Liberty St.,

New York.

Hayden & Derby Mfg. Co., 85-89 Liberty

St., New York.

Jarecki Mfg. Co., Erie, Pa.

Jenkins Bros., 71 John St., New York.

Kennedy Valve Mfg. Co., 57 Beekman

St., New York.

Lunkenheimer Company, Cincinnati, O.

**Manning, Maxwell & Moore, Inc.**, 85-89 Liberty St., New York.

**Mast, Foos & Co.**, Springfield, O.  
**National Tube Co.**, Pittsburgh, Pa.

**Noite Brass Co.**, Springfield, O.  
**Pittsburgh Valve, Foundry & Construction Co.**, Pittsburgh, Pa.

**Wm. Powell Co.**, Cincinnati, O.  
**Walworth Mfg. Co.**, Boston, Mass.

**R. D. Wood & Co.**, 400 Chestnut St., Philadelphia, Pa.

**Valves, Cylinder Relief—**  
**American Steam Gauge & Valve Mfg. Co.**, Boston, Mass.

**Ashton Valve Co.**, Boston, Mass.

**Valves, Exhaust—**  
**Eynon-Evans Mfg. Co.**, 1507 Clearfield St., Philadelphia, Pa.

**Jenkins Bros.**, 71 John St., New York.

**Pittsburgh Valve, Foundry & Construction Co.**, Pittsburgh, Pa.

**Wm. Powell Co.**, Cincinnati, O.

**Valves, Fire Sprinkler—**  
**Kennedy Valve Mfg. Co.**, 57 Beekman St., New York.

**Valves, Float—**  
**W. E. Caldwell Co.**, Louisville, Ky.

**Mast, Foos & Co.**, Springfield, O.

**Pittsburgh Valve, Foundry & Construction Co.**, Pittsburgh, Pa.

**Valves, Foot—**  
**American Spiral Pipe Works**, 48th Ave. and 14th St., Chicago, Ill.

**Mast, Foos & Co.**, Springfield, O.

**National Tube Co.**, Pittsburgh, Pa.

**Pittsburgh Valve, Foundry & Construction Co.**, Pittsburgh, Pa.

**R. D. Wood & Co.**, 400 Chestnut St., Philadelphia, Pa.

**Valves, Gas and Gasoline Engine—**  
**Lunkenheimer Co.**, Cincinnati, O.

**Valves, Gasoline Tank Reserve and Alarm—**  
**Turner Brass Works**, Sycamore, Ill.

**Valves, Gate—**  
**Jenkins Bros.**, 71 John St., New York.

**Kennedy Valve Mfg. Co.**, 57 Beekman St., New York.

**Manning, Maxwell & Moore, Inc.**, 85 Liberty St., New York.

**National Tube Co.**, Pittsburgh, Pa.

**Ohio Brass Co.**, Mansfield, O.

**Pennsylvania Engineering Works**, New Castle, Pa.

**Pittsburgh Gage & Supply Co.**, Pittsburgh, Pa.

**Pittsburgh Mfg. Co.**, Pittsburgh, Pa.

**Pittsburgh Valve, Foundry & Construction Co.**, Pittsburgh, Pa.

**Wm. Powell Co.**, Cincinnati, O.

**Walworth Mfg. Co.**, Boston, Mass.

**Watson-Stillman Co.**, 50 Church St., New York.

**R. D. Wood & Co.**, 400 Chestnut St., Philadelphia, Pa.

**Valves, High Pressure—**  
**Bowes-Adams Co.**, Pittsburgh, Pa.

**Hancock Inspirator Co.**, 85-89 Liberty St., New York.

**Indestructible Metal Co.**, 50 Church St., New York.

**Manning, Maxwell & Moore, Inc.**, 85 Liberty St., New York.

**Pittsburgh Valve, Foundry & Construction Co.**, Pittsburgh, Pa.

**Valves, Hose—**  
**National Tube Co.**, Pittsburgh, Pa.

**Valves, House Heating Boiler Safety—**  
**Consolidated Safety Valve Co.**, 85-89 Liberty St., New York.

**Manning, Maxwell & Moore, Inc.**, 85 Liberty St., New York.

**Valves, Hydraulic—**  
**American Spiral Pipe Works**, 48th Ave. and 14th St., Chicago, Ill.

**Bowes-Adams Co.**, Pittsburgh, Pa.

**Chambersburg Engineering Co.**, Chambersburg, Pa.

**Charles F. Elmes Engineering Co.**, 253-259 Fulton St., Chicago, Ill.

**Morgan Engineering Co.**, Alliance, O.

**National Tube Co.**, Pittsburgh, Pa.

**Pittsburgh Valve, Foundry & Construction Co.**, Pittsburgh, Pa.

**Taylor-Wilson Mfg. Co.**, McKees Rocks, Pa.

**R. D. Wood & Co.**, 400 Chestnut St., Philadelphia, Pa.

**Valves, Hydraulic Relief—**  
**American Steam Gauge & Valve Mfg. Co.**, Boston, Mass.

**Consolidated Safety Valve Co.**, 85-89 Liberty St., New York.

**Lunkenheimer Co.**, Cincinnati, O.

**Wm. Powell Co.**, Cincinnati, O.

**Sheffield Car Co.**, Three Rivers, Mich.

**Watson-Stillman Co.**, 50 Church St., New York.

**Valves, Indicator—**  
**Kennedy Valve Mfg. Co.**, 57 Beekman St., New York.

**National Tube Co.**, Pittsburgh, Pa.

**Valves, Lever—**  
**Jenkins Bros.**, 71 John St., New York.

**Kennedy Valve Mfg. Co.**, 57 Beekman St., New York.

**Lunkenheimer Co.**, Cincinnati, O.

**Mason Regulator Co.**, Boston, Mass.

**Wm. Powell Co.**, Cincinnati, O.

**Valves, Locomotive Blow Off—**  
**Consolidated Safety Valve Co.**, 85-89 Liberty St., New York.

**Hancock Inspirator Co.**, 85-89 Liberty St., New York.

**Lunkenheimer Co.**, Cincinnati, O.

**Manning, Maxwell & Moore, Inc.**, 85-89 Liberty St., New York.

**Valves, Motor Operated—**  
**Kennedy Valve Mfg. Co.**, 57 Beekman St., New York.

**Valves, Needle—**  
**American Gas Machine Co.**, Albert Lea, Minn.

**Lunkenheimer Co.**, Cincinnati, O.

**National Tube Co.**, Pittsburgh, Pa.

**Valves, Nickel-Bronze—**  
**U. S. Indestructible Gasket Co.**, 50 Church St., New York.

**Valves, Non-Return Stop—**  
**Power Specialty Co.**, 111 Broadway, N. Y.

**Valves, Pop Safety—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

**Valves, Pressure Regulating—**

Mason Regulator Co., Boston, Mass.

National Tube Co., Pittsburgh, Pa.

Ohio Brass Co., Mansfield, O.

**Valves, Radiator—**

Hancock Inspirator Co., 85-89 Liberty St., New York.

Jarecki Mfg. Co., Erie, Pa.

Jenkins Bros., 71 John St., New York.

Kennedy Valve Mfg. Co., 57 Beekman St., New York.

Lunkenheimer Company, Cincinnati, O.

National Tube Co., Pittsburgh, Pa.

Ohio Brass Co., Mansfield, O.

Walworth Mfg. Co., Boston, Mass.

**Valves, Reducing—**

Jenkins Bros., 71 John St., N. Y.

Mason Regulator Co., Boston, Mass.

Ohio Brass Co., Mansfield, O.

Walworth Mfg. Co., Boston, Mass.

Watson-Stillman Co., 50 Church St., New York.

**Valves, Regrinding—**

National Tube Co., Pittsburgh, Pa.

**Valves, Regrinding Disc—**

Wm. Powell Co., Cincinnati, O.

**Valves, Relief—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

Ashton Valve Co., Boston, Mass.

Consolidated Safety Valve Co., 85-89 Liberty St., New York.

Crosby Steam Gauge & Valve Co., Boston.

Jarecki Mfg. Co., Erie, Pa.

Jenkins Bros., 71 John St., New York.

Lunkenheimer Company, Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Mason Regulator Co., Boston, Mass.

John H. McGowan & Co., Cincinnati, O.

Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

Wm. Powell Co., Cincinnati, O.

Sheffield Car Co., Three Rivers, Mich.

Walworth Mfg. Co., Boston, Mass.

Watson-Stillman Co., 50 Church St., New York.

**Valves, Reversing—**

Mesta Machine Co., Pittsburgh, Pa.

John W. Seaver, Cleveland, O.

Wellman-Seaver-Morgan Co., Cleveland, O.

**Valves, Reversing, Gas and Air—**

Morgan Construction Co., Worcester, Mass.

**Valves, Rubber—**

H. O. Canfield, Bridgeport, Ct.

Crosby Steam Gauge & Valve Co., Boston.

Indestructible Metal Co., 50 Church St., New York.

Jenkins Bros., 71 John St., New York.

New York Belting & Packing Co., 91-93 Chambers St., New York.

**Valves, Safety—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

Ashton Valve Co., Boston, Mass.

Consolidated Safety Valve Co., 85-89 Liberty St., New York.

Crosby Steam Gauge & Valve Co., Boston.

Jarecki Mfg. Co., Erie, Pa.

Jenkins Bros., 71 John St., New York.

Kennedy Valve Mfg. Co., 57 Beekman St., New York.

Lunkenheimer Company, Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

National Tube Co., Pittsburgh, Pa.

Wm. Powell Co., Cincinnati, O.

Watson-Stillman Co., 50 Church St., New York.

**Valves, Siemens Gas—**

Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

**Valves, Sniffing—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

Ashton Valve Co., Boston, Mass.

Consolidated Safety Valve Co., 85-89 Liberty St., New York.

**Valves, Steam Pump—**

Indestructible Metal Co., 50 Church St., New York.

Jenkins Bros., 71 John St., New York.

**Valves, Stop and Waste—**

Hancock Inspirator Co., 85-89 Liberty St., New York.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

**Valves, Tank—**

Hancock Inspirator Co., 85-89 Liberty St., New York.

Mast, Foos & Co., Springfield, O.

**Valves, Throttle—**

Hancock Inspirator Co., 85-89 Liberty St., New York.

Lunkenheimer Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., 85-89 Liberty St., New York.

Mesta Machine Co., Pittsburgh, Pa.

Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

Wm. Powell Co., Cincinnati, O.

**Valves, Tubular Well—**

American Well Works, Aurora, Ill.

**Valves, Tuxere—**

Lunkenheimer Co., Cincinnati, O.

**Valves, Vacuum—**

Consolidated Safety Valve Co., 85-89 Liberty St., New York.

John H. McGowan Co., Cincinnati, O.

Mason Regulator Co., Boston, Mass.

**Valves, Water Relief—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

Consolidated Safety Valve Co., 85-89 Liberty St., New York.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

**Vanes, Metal—**

(See Finales and Vanes, Metal.)

**Vanes, Weather—**

(See Iron, Brass and Bronze, Ornamental.)

**Vapor Lamps, Gasoline—**

(See Lamps, Gasoline, Gas.)

**Varnish and Paint Removers—**

Schneider & Trenkamp Co. Div., American Stove Co., Cleveland, O.

**Varnish Cans—**

(See Cans, Paint and Varnish.)

**Varnish-Rubbing Machines—**  
(See Sand Papering and Varnish Rubbing Machines.)

**Varnishes, Japans, &c.—**  
Carpenter-Morton Co., Boston, Mass.  
Martin-Senour Co., 2514 Quarry St., Chicago, Ill.  
Thompson & Co., Allegheny, Pa.

**Varnishing Machines—**  
Chambers Bros. Co., 52d St., below Lancaster Ave., Philadelphia, Pa.

**Vases, Decorated Metal—**  
Goodwin & Kintz Co., Winsted, Ct.

**Vases, Lawn—**  
S. Cheney & Son, Manlius, N. Y.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Nimmo Fence & Wire Works Co., Norwood, O.

Steel Basket Co., Cedar Rapids, Ia.  
Sterling Emery Wheel Mfg. Co., Tiffin, O.  
Stewart Iron Works Co., Cincinnati, O.  
Van Dorn Iron Works Co., Cleveland, O.

**Vases, Silver Plated—**  
International Silver Co., Meriden, Ct.

**Vats, Acid—**  
(See Acid Tanks, Tubs, &c.)

**Vaults, Fire and Burglar Proof—**

Bethlehem Steel Co., So. Bethlehem, Pa.  
Stewart Iron Works Co., Cincinnati, O.  
Taylor Iron & Steel Co., High Bridge, N. J.

Van Dorn Iron Works Co., Cleveland, O.  
**Vegetable, Food and Meat Cutters—**

(See Cutters, Food, Meat and Vegetable.)

**Vegetable Boilers, Wire—**  
(See Kitchen Articles, Wire.)

**Vegetable Mashers, Parers, &c.—**

(See Mashers, Parers, &c.)

**Vehicle Wheels—**  
(See Wheels, Vehicle.)

**Veneer Points—**  
(See Points, Picture and Veneer.)

**Veneering Saws—**  
(See Saws, Segment or Veneering.)

**Ventilating and Heating Apparatus—**

(See Heating and Ventilating Apparatus.)

**Ventilating System, Factory Sash Operating—**

G. Drouve Co., Bridgeport, Ct.  
David Lupton's Sons Co., Westmoreland and Janney Sts., Philadelphia, Pa.

**Ventilating Window Fasteners—**  
(See Locks, Sash and Ventilating.)

**Ventilator Appliances—**  
(See Heating and Ventilating Apparatus.)

**Ventilator Caps, Cord—**  
(See Caps, Cord.)

**Ventilators—**  
(See Registers and Ventilators.)

**Ventilators and Chimney Caps—**

Berger Bros. Co., 231-237 Arch St., Philadelphia, Pa.

Ruffalo Forge Co., Buffalo, N. Y.

Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

Hea-Snyder Co., Massillon, O.

H. E. Hessler Co., Syracuse, N. Y.  
Merchant & Evans Co., Philadelphia, Pa.  
Wiley & Russell Mfg. Co., Greenfield, Mass.

**Ventilators, Building—**  
Boston Blower Co., Hyde Park, Mass.  
Burt Mfg. Co., Akron, O.  
Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.

G. Drouve Co., Bridgeport, Ct.  
Howard & Morse, 45 Fulton St., N. Y.  
Merchant & Evans Co., Philadelphia, Pa.  
Sterling Blower & Pipe Mfg. Co., Hartford, Ct.

**Ventilators, Flue—**

Merchant & Evans Co., Philadelphia, Pa.

**Ventilators, Railroad Car—**  
Harrington & King Perforating Co., 224 N. Union St., Chicago, Ill.

**Ventilators, Skylight—**

E. B. Badger & Sons Co., Boston, Mass.  
Burt Mfg. Co., Akron, O.

G. Drouve Co., Bridgeport, Ct.  
Merchant & Evans Co., Philadelphia, Pa.

**Ventilators, Window—**

Caldwell Mfg. Co., Rochester, N. Y.

**Vessel Loading and Unloading Machinery—**

Wellman-Seaver-Morgan Co., Cleveland, O.

**Vise and Anvil—**  
(See Anvil and Vise.)

**Vise Clamps, Jaws—**  
(See Clamps, Jaws.)

**Vise Grabs, Pliers—**

Prentiss Vise Co., 44 Barclay St., N. Y.

**Vise Jaw Caps—**

Prentiss Vise Co., 44 Barclay St., N. Y.

**Vises, Amateur—**

Arcade Mfg. Co., Freeport, Ill.

Columbia Grey Iron Co., Columbia, Pa.

**Vises, Bench—**  
(See Vises, Parallel.)

**Vises, Bicycle—**

Fox Machine Co., Grand Rapids, Mich.

Prentiss Vise Co., 44 Barclay St., N. Y.

**Vises, Cabinet—**

Barbour-Stockwell Co., Cambridgeport, Mass.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Oliver Machinery Co., Grand Rapids, Mich.

Prentiss Vise Co., 44 Barclay St., N. Y.

Wyman & Gordon, Worcester, Mass.

**Vises, Carpenters'—**  
(See Vises, Woodworkers.)

**Vises, Carpenters' Wooden—**

Oliver Machinery Co., Grand Rapids, Mich.

**Vises, Carpet and Oilcloth—**  
(See Stretchers, Carpet.)

**Vises, Coach Makers'—**

Chas. Parker Co., Meriden, Ct.

**Vises, Die Sinkers—**

Chas. Parker Co., Meriden, Ct.

**Vises, Drill and Anvil—**

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Millers Falls Co., 23 Warren St., N. Y.

Prentiss Vise Co., 44 Barclay St., N. Y.

**Vises, Drill Press—**

Hoggon & Pettis Mfg. Co., New Haven, Ct.

- Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- B. B. Noyes & Co., Greenfield, Mass.
- Skinner Chuck Co., New Britain, Ct.
- Sterling Emery Wheel Mfg. Co., Tiffin, O.
- Vises, Foot—**  
B. B. Noyes & Co., Greenfield, Mass.
- Vises, Hand or Pin—**  
Billings & Spencer Co., Hartford, Ct.  
John B. Fray & Co., Bridgeport, Ct.  
Goodell-Pratt Co., Greenfield, Mass.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Millers Falls Co., 28 Warren St., N. Y.
- Schuchardt & Schutte, 90 West St., N. Y.
- Otis A. Smith, Rockfall, Ct.
- L. S. Starrett Co., Athol, Mass.
- Wiebusch & Hilger, Ltd., 106-110 Lafayette St., New York.
- Wrightsville Hardware Co., Wrightsville, Pa.
- Vises, Horseshoers'—**  
Blake & Johnson Co., Waterbury, Ct.  
P. F. Burke, Boston, Mass.  
B. B. Noyes & Co., Greenfield, Mass.  
Wiley & Russell Mfg. Co., Greenfield, Mass.
- Vises, Jewelers'—**  
Columbia Grey Iron Co., Columbia, Pa.
- Charles Parker Co., Meriden, Ct.
- Vises, Machinists'—**  
(See Vises, Parallel.)
- Vises, Milling Machine, Planer and Shaper—**  
Becker Milling Machine Co., Hyde Park, Mass.
- Brown & Sharpe Mfg. Co., Providence, R. I.
- Fox Machine Co., Grand Rapids, Mich.
- Gould & Eberhardt, Newark, N. J.
- Hendey Machine Co., Torrington, Ct.
- Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Niles-Bement-Pond Co., 111 Broadway, New York.
- Potter & Johnston Machine Co., Pawtucket, R. I.
- Pratt & Whitney Co., Hartford, Ct.
- Schuchardt & Schutte, 90 West St., N. Y.
- Sterling Emery Wheel Mfg. Co., Tiffin, O.
- Vises, Parallel—**  
Eagle Anvil Works, Trenton, N. J.  
Fox Machine Co., Grand Rapids, Mich.  
Humphrey & Sons, Joliet, Ill.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Merrill Bros., Maspeth, N. Y.
- Millers Falls Co., 28 Warren St., N. Y.
- Chas. Parker Co., Meriden, Ct.
- Prentiss Vise Co., 44 Barclay St., N. Y.
- Vises, Pin—**  
(See Vises, Hand or Pin.)
- Vises, Pipe—**  
American Well Works, Aurora, Ill.  
Ruttenfield & Co., Derby Line, Vt.  
Curtis & Curtis Co., Bridgeport, Ct.  
A. L. Henderson's Sons, Wilmington, Del.  
Humphreys Mfg. Co., Mansfield, O.  
Jarecki Mfg. Co., Erie, Pa.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Meat, Foos & Co., Springfield, O.
- Chas. Parker Co., Meriden, Ct.
- Prentiss Vise Co., 44 Barclay St., N. Y.
- D. Saunders' Sons, Yonkers, N. Y.
- Schuchardt & Schutte, 90 West St., N. Y.
- Walworth Mfg. Co., Boston, Mass.
- F. E. Wells & Sons Co., Greenfield, Mass.
- J. H. Williams & Co., Brooklyn, N. Y.
- Vises, Saw Filers'—**  
E. C. Atkins & Co., Indianapolis, Ind.  
Henry Diaston & Sons, Philadelphia, Pa.  
New Britain Machine Co., New Britain, Ct.
- Oliver Machinery Co., Grand Rapids, Mich.
- Chas. Parker Co., Meriden, Ct.
- Simonds Mfg. Co., Fitchburg, Mass.
- Vises, Solid Box—**  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Vises, Swivel Base—**  
(See Vises, Parallel.)
- Vises, Typewriter Manufacturers'—**  
Prentiss Vise Co., 44 Barclay St., N. Y.
- Vises, Woodworkers'—**  
Barbour-Stockwell Co., Cambridgeport, Mass.
- Fox Machine Co., Grand Rapids, Mich.
- Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.
- Oliver Machinery Co., Grand Rapids, Mich.
- Prentiss Vise Co., 44 Barclay St., N. Y.
- Wyman & Gordon, Worcester, Mass.
- Wads, Gun—**  
Union Metallic Cartridge Co., Bridgeport, Ct.
- Waffle Irons—**  
(See Irons, Waffle.)
- Waging Wire—**  
(See Wire Pointing.)
- Wagon and Carriage Machinery—**  
Badger State Machine Co., Inc., Janesville, Wis.
- National Machinery Co., Tiffin, O.
- Williams, White & Co., Moline, Ill.
- Wagon Axles, Chains, &c.—**  
(See Axles, Chains, &c.)
- Wagon Hardware—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Wagons, Dairy—**  
Sycamore Wagon Works, Sycamore, Ill.
- Wagons, Delivery (Bakery, Furniture, Grocery, Hardware, Laundry, Meat)—**  
Sycamore Wagon Works, Sycamore, Ill.
- Wagons, Delivery, Gasoline—**  
Sheffield Car Co., Three Rivers, Mich.
- Wagons, Live Stock—**  
Sycamore Wagon Works, Sycamore, Ill.
- Wagons, Mill—**  
Kilbourne & Jacobs Mfg. Co., Columbus, O.
- Wagons, Piano—**  
Sycamore Wagon Works, Sycamore, Ill.
- Wagons, Sprinkling—**  
Winship Mfg. Co., Racine, Wis.
- Waist Hangers—**  
(See Hangers, Garment and Trouser.)
- Waiters, Dumb—**  
Energy Elevator Co., 214 New St., Philadelphia, Pa.
- Sidney Elevator Mfg. Co., Sidney, O.
- J. G. Speidel, Reading, Pa.
- Storm Mfg. Co., Newark, N. J.
- Warner Elevator Mfg. Co., Cincinnati, O.
- Warsaw Elevator Co., Warsaw, N. Y.

**Walters, Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Walk Scrapers—**  
(See Scrapers, Walk and Street.)

**Wall Cleaning Compound—**  
(See Cleaner, Wall Paper and Fresco.)

**Wall Lighting Fixtures—**  
(See Chandeliers and Wall Fixtures.)

**Wall Scrapers—** (See Scrapers.)

**Wall Ties—**

Wright Wire Co., Worcester, Mass.

**Wantage Rods—**  
(See Rods, Gauging.)

**Wardrobe Hooks—**  
(See Hooks, Coat, Hat, &c.)

**Wardrobes, Office and Shop—**  
(See Lockers.)

**Ware, Brass and Copper—**  
Geuder, Paeschke & Frey Co., Milwaukee, Wis.

Lalanc & Grosjean Mfg. Co., 299 Broadway, New York.

**Ware, Enameled—**  
Avery Stamping Co., Cleveland, O.  
Cleveland Stamping & Tool Co., Cleveland, O.

Geuder, Paeschke & Frey Co., Milwaukee, Wis.

Lalanc & Grosjean Mfg. Co., 299 Broadway, New York.

Stuart & Peterson Co., Burlington, N. J.  
Jacob J. Vollrath Mfg. Co., Sheboygan, Wis.

**Ware, Fused Quartz—**  
Charles Engelhard, 32 Cortlandt St., N. Y.

**Ware, Galvanized Sheet Iron—**

Dover Stamping & Mfg. Co., Cambridge, Mass.

Geuder, Paeschke & Frey Co., Milwaukee, Wis.

Lalanc & Grosjean Mfg. Co., 299 Broadway, New York.

**Ware, Hollow, Aluminum—**  
Geuder, Paeschke & Frey Co., Milwaukee, Wis.

**Ware, Hollow, Cast Iron Stove—**

Stuart & Peterson Co., Burlington, N. J.  
Jacob J. Vollrath Mfg. Co., Sheboygan, Wis.

**Ware, Hollow, Silver and Silver Plated—**

International Silver Co., Meriden, Ct.

**Ware, Hollow Steel—**

Avery Stamping Co., Cleveland, O.  
Cleveland Stamping & Tool Co., Cleveland, O.

New York Stamping Co., Brooklyn, N. Y.  
Sturges & Burn Mfg. Co., Chicago, Ill.

**Ware, Japanned—**  
Dover Stamping & Mfg. Co., Cambridge, Mass.

Geuder, Paeschke & Frey Co., Milwaukee, Wis.

Lalanc & Grosjean Mfg. Co., 299 Broadway, New York.

**Ware, Nickel Plated—**  
New York Stamping Co., Brooklyn, N. Y.

**Ware, Plainished—**  
Lalanc & Grosjean Mfg. Co., 299 Broadway, New York.

**Ware, Platinum—**

Baker & Co., Inc., Newark, N. J.  
J. Bishop & Co., Malvern, Pa.

**Ware, Tin—**  
(See Tinware.)

**Warehouse Trucks—**  
(See Trucks, Store Warehouse, etc.)

**Warm Air Furnaces—**  
(See Furnaces, Warm Air.)

**Warmers, Foot—**  
Chicago Flexible Shaft Co., 124-126 La Salle Ave., Chicago, Ill.

Pike Mfg. Co., Pike, N. H.

**Warp and Yarn—**  
Broderick & Bascom Rope Co., St. Louis.  
Estes Mills, Fall River, Mass.

**Wash Bowls, Factory and Shop—**  
Manufacturing Equipment & Engineering Co., Boston, Mass.

**Washboard Blanks—**  
Matthiessen & Hegeler Zinc Co., La Salle, Ill.

**Washboard Knives—**  
(See Knives, Machine.)

**Washboards—**  
Saginaw Mfg. Co., Saginaw, Mich.

**Washer and Humidifier, Gas—**

Buffalo Forge Co., Buffalo, N. Y.

**Washer Cutters—**  
(See Cutters, Washer.)

**Washer Machines—**  
National Machinery Co., Tiffin, O.

**Washers, Alloy—**  
U. S. Indestructible Gasket Co., 50 Church St., New York.

**Washers and Disks, Rubber—**  
(See Gaskets and Rings, Rubber.)

**Washers and Street Hydrants—**  
(See Hydrants and Street Washers.)

**Washers, Automobile and Carriage, Nozzle—**

Long & Mann Co., Rochester, N. Y.

**Washers, Axle—**  
Allegheny Forging Co., Pittsburgh, Pa.

Bettcher Mfg. Co., Cleveland, O.  
Hubbard & Co., Pittsburgh, Pa.

National Bolt & Nut Co., Pittsburgh, Pa.  
New York Washer & Gasket Co., Brooklyn, N. Y.

**Washers, Bibb and Faucet—**  
Bettcher Mfg. Co., Cleveland, O.

J. M. Marston & Co., Boston, Mass.

**Washers, Brass—**  
Bettcher Mfg. Co., Cleveland, O.

Hanson Bros., Plainville, Ct.  
Wm. H. Haskell Mfg. Co., Pawtucket, R. I.

Homer F. Livermore, Boston, Mass.  
New York Washer & Gasket Co., Brooklyn, N. Y.

Arthur T. Rutter & Co., 256 Broadway, New York.

Scovill Mfg. Co., Waterbury, Ct.  
Seymour Mfg. Co., Seymour, Ct.

Steward & Romaine Mfg. Co., Philadelphia, Pa.

U. S. Indestructible Gasket Co., 50 Church St., New York.

W. & S. Mfg. Co., Worcester, Mass.

**Washers, Cast—**  
American Iron & Steel Mfg. Co., Lebanon, Pa.



Bancroft & Co. Philadelphia, Pa.  
 Belmont Iron Works, Inc., Philadelphia,  
 Bethlehem Foundry & Machine Co.,  
 South Bethlehem, Pa.  
 E. E. Brown & Co. McKean and Meadow  
 Sts., Philadelphia, Pa.  
 S. Cheney & Son, Manlius, N. Y.  
 Samuel Hall's Sons, 229-233 W. 10th St.,  
 New York.  
 Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
 Humphrey Machine Co., Keene, N. H.  
 M. Lanz & Sons, Pittsburgh, Pa.  
 National Bolt & Nut Co., Pittsburgh, Pa.  
 Pittsburgh Mfg. Co., Pittsburgh, Pa.  
 Louis Sacks, Newark, N. J.  
 Upson Nut Co., Cleveland, O.  
 Western Foundry & Sash Weight Co.,  
 St. Louis, Mo.  
 R. W. Whitehurst Co., Norfolk, Va.

### **Washers, Clothes—** (See Washing Machines.)

### **Washers, Copper—**

Homer F. Livermore, Boston, Mass.  
 New York Washer & Gasket Co., Brook-  
 lyn, N. Y.  
 Seymour Mfg. Co., Seymour, Ct.  
 U. S. Indestructible Gasket Co., 50  
 Church St., New York.

### **Washers, Disc—**

Bancroft & Co., Philadelphia, Pa.  
 W. & S. Mfg. Co., Worcester, Mass.  
 Worcester Pressed Steel Co., Worcester,  
 Mass.

### **Washers, Fiber, Felt and Paper—**

J. M. Marston & Co., Boston, Mass.  
 New York Washer & Gasket Co., Brook-  
 lyn, N. Y.  
 U. S. Indestructible Gasket Co., 50  
 Church St., New York.

### **Washers, Foundation—** (See Iron Work, Builders')

### **Washers, Galvanized—**

Bettcher Mfg. Co., Cleveland, O.  
 M. Lanz & Sons, Pittsburgh, Pa.  
 Thomas Laughlin Co., Portland, Me.  
 National Bolt & Nut Co., Pittsburgh, Pa.  
 Nicetown Plate Washer Co., 1822-1850  
 W. Juniata St., Philadelphia, Pa.  
 Wilcox, Crittenden & Co., Inc., Middle-  
 town, Ct.

### **Washers, Iron and Steel—** (See Washers, Wrought.)

### **Washers, Knob—**

Taylor & Boggis Foundry Co., Cleve-  
 land, O.

### **Washers, Lead—**

J. M. Marston & Co., Boston, Mass.  
 U. S. Indestructible Gasket Co., 50  
 Church St., New York.

### **Washers, Lead Roofing—**

New York Washer & Gasket Co., Brook-  
 lyn, N. Y.  
 U. S. Indestructible Gasket Co., 50  
 Church St., New York.

### **Washers, Leather and Raw- hide—**

Barnes Mfg. Co., Mansfield, O.  
 Graton & Knight Mfg. Co., Worcester,  
 Mass.  
 J. M. Marston & Co., Boston, Mass.  
 New York Washer & Gasket Co., Brook-  
 lyn, N. Y.

Quiride Co., Syracuse, N. Y.  
 U. S. Indestructible Gasket Co., 50  
 Church St., New York.

### **Washers, Light Wrought—** J. H. Sessions & Son, Bristol, Ct.

### **Washers, Lock—**

Hobbs Mfg. Co., Worcester, Mass.

### **Washers, Metallic—** Indestructible Metal Co., 50 Church St., New York.

Pawtucket Mfg. Co., Pawtucket, R. I.  
 Arthur T. Rutter & Co., 256 Broadway,  
 New York.

### **Washers, Oil Can—**

J. M. Marston & Co., Boston, Mass.

### **Washers, Phosphor Bronze—** Phosphor-Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

### **Washers, Piano—** New York Washer & Gasket Co., Brook- lyn, N. Y.

### **Washers, Plate—** (See Washers, Wrought.)

### **Washers, Prop Block—**

McKinnon Dash Co., Buffalo, N. Y.

### **Washers, Railroad Car—**

Osborn Mfg. Co., Cleveland, O.

### **Washers, Rubber—**

(See Gaskets and Rings, Rubber.)

### **Washers, Shoddy Mill—** Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

### **Washers, Special—**

Bettcher Mfg. Co., Cleveland, O.  
 Crosby Co., Buffalo, N. Y.  
 Hubbard & Co., Pittsburgh, Pa.  
 National Bolt & Nut Co., Pittsburgh, Pa.  
 New York Washer & Gasket Co., Brook-  
 lyn, N. Y.  
 U. S. Indestructible Gasket Co., 50  
 Church St., New York.  
 Worcester Pressed Steel Co., Worcester,  
 Mass.

### **Washers, Steel—**

Bettcher Mfg. Co., Cleveland, O.  
 Crosby Co., Buffalo, N. Y.  
 Russell, Burdall & Ward Bolt & Nut  
 Co., Port Chester, N. Y.  
 J. H. Sessions & Son, Bristol, Ct.  
 Youngstown Iron & Steel Roofing Co.,  
 Youngstown, O.

### **Washers, Tin—**

(See Washers, Metallic.)

### **Washers, Wrought—**

Allegheny Forging Co., Pittsburgh, Pa.  
 American Iron & Steel Mfg. Co., Leba-  
 non, Pa.  
 Atlas Bolt & Screw Co., Cleveland, O.  
 Avery Stamping Co., Cleveland, O.  
 Belmont Iron Works, Inc., Philadelphia.  
 Bettcher Mfg. Co., Cleveland, O.  
 Clark Bros. Bolt Co., Middale, Ct.  
 Cobb & Drew, Inc., Plymouth Mass.  
 Graham Nut Co., Pittsburgh, Pa.  
 Grand Crossing Tack Co., Grand Crossing,  
 Ill.

Griffin Mfg. Co., Erie, Pa.  
 Sam'l Hall's Sons, 229-233 W. 10th St.,  
 New York.

Wm. H. Haskell Mfg. Co., Pawtucket, R. I.  
 Henry A. Hitner's Sons Co., cor. Hunt-  
 ington and Aramingo Aves., Philadel-  
 phia, Pa.

Hobbs Mfg. Co., Worcester, Mass.  
Hubbard & Co., Pittsburgh, Pa.  
R. C. Jenkinson & Co., Newark, N. J.  
M. Lanz & Sons, Pittsburgh, Pa.  
Lawrence Bros., Sterling, Ill.  
H. A. Matthews Mfg. Co., Seymour, Ct.  
McKinney Mfg. Co., Allegheny, Pa.  
Milton Mfg. Co., Milton, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
Nietown Plate Washer Co., 1822-1850 W.  
Junia St., Philadelphia, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.  
Pittsburgh Mfg. Co., Pittsburgh, Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Rhode Island Tool Co., Providence, R. I.  
Russell, Burdall & Ward Bolt & Nut  
Co., Port Chester, N. Y.

J. H. Sessions & Son, Bristol, Ct.  
Shelton Co., Shelton, Ct.  
Stanley Works, New Britain, Ct.  
Upson Nut Co., Cleveland, O.  
W. & S. Mfg. Co., Worcester, Mass.  
Wrought Washer Mfg. Co., Milwaukee.

**Washers, Wrought, Square—**  
Bettcher Mfg. Co., Cleveland, O.  
Hubbard & Co., Pittsburgh, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
Nietown Plate Washer Co., 1822-1850  
Junia St., Philadelphia, Pa.

**Washing and Separating  
Machinery, Ore—**  
Jeffrey Mfg. Co., Columbus, O.

**Washing Machinery, Coal—**  
(See Coal Washing Machinery.)

**Washing Machines, Clothes—**  
American Woodenware Mfg. Co., To-  
ledo, O.

Boss Washing Machine Co., Cincinnati, O.  
H. F. Brammer Mfg. Co., Davenport, Ia.  
John Dietz Mfg. Co., Cincinnati, O.  
Globe Mfg. Co., Perry, Ia.  
Hurley Machine Co., 153-159 S. Jefferson  
St., Chicago, Ill.

Imperial Motor Co., Grove City, Pa.  
Princess Mfg. Co., Cincinnati, O.  
Richmond Cedar Works, Richmond, Va.  
Rotary Washing Machine Co., St. Louis,  
Mo.

**Washing Machines, Clothes,  
Electric—**

American Woodenware Mfg. Co., To-  
ledo, O.

Hurley Machine Co., 153-159 S. Jefferson  
St., Chicago, Ill.

**Washing Machines, Clothes,  
Water Motor—**

American Woodenware Mfg. Co., To-  
ledo, O.

Imperial Motor Co., Grove City, Pa.

**Waste Baskets, Boxes—**  
(See Baskets, Boxes.)

**Waste, Cotton—**

Broderick & Rascom Rope Co., St. Louis.  
Estes Mills, Fall River, Mass.  
A. Leschen & Sons Rope Co., St. Louis

Manning, Maxwell & Moore, Inc., 85 Lib-  
erty St., New York.

New York Cordage Co., 80 Wall St.,  
New York.

Walsh's, Sons & Co., Newark, N. J.

**Waste, Wool—**  
New York Cordage Co., 80 Wall St.,  
New York.

**Watch Machinery—**  
Waltham Machine Works, Waltham, Mass.

**Watches—**  
Ansonia Clock Co., 99 John St., N. Y.

**Watches, Timers and Split  
Timers—**

Riggs & Bro., 310 Market St., Philadel-  
phia, Pa.

**Watchmen's Clocks—**  
(See Clocks, Watchmen's.)

**Water Closet Hinges—**  
(See Hinges, Water Closet Seat.)

**Water Columns—**

American Steam Gauge & Valve Mfg.  
Co., Boston, Mass.

**Water Columns, Safety—**  
Lunkenheimer Co., Cincinnati, O.

Pittsburgh Gage & Supply Co., Pitts-  
burgh, Pa.

**Water Elevators, &c.—**  
(See Elevators, &c.)

**Water Pipe, Riveted—**  
(See Pipe, Riveted Steel.)

**Water Softening and Pur-  
ifying Process—**

Dodge Mfg. Co., Mishawaka, Ind.

Harrison Safety Boiler Works, 3194 N.  
17th St., Philadelphia, Pa.

Wm. B. Scaife & Sons Co., Pittsburgh.

**Water Wheels—**  
Humphrey Machine Co., Keene, N. H.

Lane Mfg. Co., Montpelier, Vt.

Poole Engineering & Machine Co., Balti-  
more, Md.

**Water Works Supplies—**

W. E. Caldwell Co., Louisville, Ky.

Charles Millar & Son Co., Utica, N. Y.

Riter-Conley Mfg. Co., Pittsburgh, Pa.

R. D. Wood & Co., 400 Chestnut St.,  
Philadelphia, Pa.

**Waterproof Wire—**  
(See Wires, Electrical.)

**Waterproofing, Cement and  
Brick—**

Samuel Cabot, Inc., Boston, Mass.

**Watt Meters, Recording—**  
(See Meters, Recording Watt.)

**Weaners, Calf and Cow—**

Andrews Wire & Iron Works, Rockford,  
Ill.

**Weatherboarding, Iron and  
Steel—**  
(See Ceiling and Siding, Iron and Steel.)

**Weatherproof Wire—**  
(See Wires, Electrical.)

**Weather Strip—**  
(See Strip, Weather.)

**Weaving Machines, Rattan—**  
Chas. Leffler & Co., Brooklyn, N. Y.

**Web Halters—**  
(See Halters.)

**Wheels, Turning, Felloe, &c.—**

E. C. Atkins & Co., Indianapolis, Ind.

Henry Diston & Sons, Philadelphia, Pa.

C. E. Jennings & Co., 42 Murray St.,  
New York.

Millers Falls Co., 28 Warren St., N. Y.

National Saw Co., Newark, N. J.

Simonds Mfg. Co., Fitchburg, Mass.

**Wedges and Shims—**  
Mathew Lanz & Sons, Pittsburgh, Pa.

Trow & Holden, Barre, Vt.

U. S. Indestructible Gasket Co., 50  
Church St., New York.

- Wedges, Axe, Hammer and Hatchet—**  
Walter W. Woodruff & Sons Co., Mount Carmel, Ct.
- Wedges, Boat—**  
(See Wedges, Steel.)
- Wedges, Coal—**  
Hubbard & Co., Pittsburgh, Pa.
- Wedges, Journal Bearing—**  
American Steel Foundries, 42 Broadway, New York.
- Wedges, Saw—**  
Hubbard & Co., Pittsburgh, Pa.
- Wedges, Stave—**  
Hubbard & Co., Pittsburgh, Pa.
- Wedges, Steel—**  
Hubbard & Co., Pittsburgh, Pa.  
Mathew Lanz & Sons, Pittsburgh, Pa.  
Oliver Iron & Steel Co., Pittsburgh, Pa.  
Transue & Williams Co., Alliance, O.
- Wedges, Stone—**  
Hubbard & Co., Pittsburgh, Pa.
- Wedges, Tie—**  
Hubbard & Co., Pittsburgh, Pa.
- Wedges, Tool Post—**  
Page-Storms Drop Forge Co., Chicopee, Mass.
- Wedges, Wood Choppers—**  
Oliver Iron & Steel Co., Pittsburgh, Pa.
- Weeders and Grass Hoes, Horse-Power—**  
Keystone Farm Machine Co., York, Pa.
- Weeders, Garden—**  
American Fork & Hoe Co., Cleveland, O.  
Arcade Mfg. Co., Freeport, Ill.  
W. J. Clark Co., Salem, O.  
Keystone Farm Machine Co., York, Pa.  
Wrightsville Hardware Co., Wrightsville, Pa.
- Weeders, Lawn—**  
Keystone Farm Machine Co., York, Pa.  
Wrightsville Hardware Co., Wrightsville, Pa.
- Weeding Hooks—**  
(See Hooks, Weeding.)
- Weights, Ball—**  
W. W. Patterson Co., Pittsburgh, Pa.
- Weights, Counter Balance Elevator—**  
E. E. Brown & Co., McKean & Meadow Sts., Philadelphia, Pa.  
Western Foundry & Sash Weight Co., St. Louis, Mo.
- Weights, Folding Bed—**  
Western Foundry & Sash Weight Co., St. Louis, Mo.
- Weights, Hitching—**  
S. Cheney & Co., Manlius, N. Y.  
Covert Mfg. Co., Troy, N. Y.
- Weights, Foundry & Mfg. Co., Plymouth, O.**  
Western Foundry & Sash Weight Co., St. Louis, Mo.  
Wrightsville Hardware Co., Wrightsville, Pa.
- Weights, Lead—**  
Western Foundry & Sash Weight Co., St. Louis, Mo.
- Weights, Paper—**  
Wrightsville Hardware Co., Wrightsville, Pa.
- Weights, Sash—**  
E. E. Brown & Co., McKean & Meadow Sts., Philadelphia, Pa.  
S. Cheney & Son, Manlius, N. Y.  
Western Foundry & Sash Weight Co., St. Louis, Mo.
- Weights, Test—**  
Standard Scale & Supply Co., Pittsburgh.
- Welders, Arc, for Repairing Steel Castings—**  
Electric Controller & Mfg. Co., Cleveland, O.  
Norton Co., Worcester, Mass.
- Welding, Aluminum—**  
Beltzer-Delcampe Welding Co., Bridgeport, Ct.  
Davis-Bournonville Co., 90 West St., New York.  
Norton Co., Worcester, Mass.
- Welding, Autogenous—**  
American Welding Co., Carbondale, Pa.  
Beltzer-Delcampe Welding Co., Bridgeport, Ct.  
Crosby Co., Buffalo, N. Y.  
Davis-Bournonville Co., 90 West St., New York.  
Industrial Oxygen Co., Hanover Bank Bldg., New York.
- Welding Compounds—**  
Beltzer-Delcampe Welding Co., Bridgeport, Ct.  
Davis-Bournonville Co., 90 West St., New York.  
F. R. Phillips & Sons Co., Pennsylvania Bldg., Philadelphia, Pa.  
Universal Fluxine Co., Urbana, O.
- Welding, Electric—**  
Randall Electric Welding Co., 40 W. 13th St., New York.  
Standard Welding Co., Cleveland, O.  
Thomson Electric Welding Co., Lynn, Mass.  
Toledo Electric Welding Co., Toledo, O.  
Worcester Pressed Steel Co., Worcester, Mass.
- Welding, Epurite Process—**  
Industrial Oxygen Co., Hanover Bank Bldg., New York.  
Worcester Pressed Steel Co., Worcester, Mass.
- Welding, Iron and Steel—**  
Beltzer-Delcampe Welding Co., Bridgeport, Ct.  
Davis-Bournonville Co., 90 West St., New York.
- Welding Iron and Steel, Thermit Process—**  
Goldschmidt Thermit Co., 90 West St., New York.
- Welding Machines, Electric—**  
Automatic Machine Co., Bridgeport, Ct.  
Randall Electric Welding Co., 40 W. 13th St., New York.  
Thomson Electric Welding Co., Lynn, Mass.  
Toledo Electric Welding Co., Toledo, O.
- Welding Machines, Flue—**  
Joseph T. Eyerson & Son, 18-22 Milwaukee Ave., Chicago, Ill.
- Welding Machines for Pipe Mills—**  
Davis-Bournonville Co., 90 West St., N. Y.

United Engineering & Foundry Co.,  
Pittsburgh, Pa.

**Welding Machines, Oxy-Acetylene—**

Beltzer-Delcampe Welding Co., Bridge-  
port, Ct.

Davis-Bourmonville Co., 90 West St.,  
New York.

**Welding Machines, Tire—**

Davis-Bourmonville Co., 90 West St.,  
New York.

Long & Allstatter Co., Hamilton, O.  
Williams, White & Co., Moline, Ill.

**Welding, Pipe—**

Beltzer-Delcampe Welding Co., Bridge-  
port, Ct.

Davis-Bourmonville Co., 90 West St.,  
New York.

Goldschmidt Thermit Co., 90 West St.,  
New York.

**Welding Plates—**

(See Plates for Welding.)

**Welding Powder for Iron and Steel—**

Davis-Bourmonville Co., 90 West St.,  
New York.

Universal Fluxine Co., Urbana, O.

**Welding Torches—**

(See Torches, Welding and Cutting.)

**Well Chains, Curbs, &c.—**

(See Chains, Curbs, &c.)

**Well Machinery—**

American Well Works, Aurora, Ill.

John H. McGowan Co., Cincinnati, O.

**Well Machinery, Salt—**

American Well Works, Aurora, Ill.

**Well Supplies and Tools  
(Pumps, Cylinders, Valves,  
Tubular Well Tools, &c.)**

American Well Works, Aurora, Ill.

Barnes Mfg. Co., Mansfield, O.

Bovard & Co., Bradford, Pa.

Consolidated Mfg. Co., Toledo, O.

A. D. Cook, Lawrenceburg, Ind.

W. & B. Douglas, Middletown, Ct.

Goulds Mfg. Co., Seneca Falls, N. Y.

Hayes Pump & Planter Co., Galva, Ill.

Hess-Snyder Co., Massillon, O.

Humphreys Mfg. Co., Mansfield, O.

Jarecki Mfg. Co., Erie, Pa.

Jenkins Bros. 71 John St., New York.

Keystone Driller Co., Beaver Falls, Pa.

S. G. Milton & Son, Franklin, Pa.

F. E. Myers & Bro., Ashland, O.

National Tube Co., Pittsburgh, Pa.

**Welling, Shoe—**

Graton & Knight Mfg. Co., Worcester,  
Mass.

**Wharf Spikes—**

(See Spikes, Dock, Wharf, &c.)

**Wheel Centers, Driving—**

American Steel Foundries, 42 Broadway,  
New York.

**Wheel Chain—**

(See Chain, Sprocket.)

**Wheelbarrows—**

(See Barrows, Wheel.)

**Wheels—**

(See Axles and Wheels.)

**Wheels, Adamite**

American Emery Wheel Works, Provi-  
dence, R. I.

**Wheels, Alundum—**

Norton Co., Worcester, Mass.

**Wheels, Automobile, Parts for—**

Crosby Co., Buffalo, N. Y.

John R. Keim Mills, Inc., Buffalo, N. Y.

Worcester Pressed Steel Co., Worcester,  
Mass.

**Wheels, Balance—**

(See Fly Wheels.)

**Wheels, Ball Bearing—**

Atlas Car & Mfg. Co., Cleveland, O.

McCabe Hanger Mfg. Co., 425-427 W. 25th  
St., New York.

**Wheels, Barrow—**

Atlas Car & Mfg. Co., Cleveland, O.

W. J. Clark Co., Salem, O.  
Kilbourne & Jacobs Mfg. Co., Colum-  
bus, O.

Taylor Iron & Steel Co., High Bridge,  
N. J.

**Wheels, Car—**

American Steel Foundries, 42 Broadway,  
New York.

Atlas Car & Mfg. Co., Cleveland, O.

Chrome Steel Works, Chrome, N. J.

Arthur Koppel Co., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

St. Louis Car Wheel Co., St. Louis, Mo.

Sheffield Car Co., Three Rivers, Mich.

Taylor Iron & Steel Co., High Bridge,  
N. J.

Ernst Wiener Co., Church and Fulton  
Sts., New York.

**Wheels, Car, Cast Iron—**

St. Louis Car Wheel Co., St. Louis, Mo.

Sheffield Car Co., Three Rivers, Mich.

**Wheels, Car, Chilled—**

Atlas Car & Mfg. Co., Cleveland, O.

St. Louis Car Wheel Co., St. Louis, Mo.

**Wheels, Car, Steel—**

American Steel Foundries, 42 Broadway,  
New York.

Mesta Machine Co., Pittsburgh, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Wheels, Car, Wood Center—**

Sheffield Car Co., Three Rivers, Mich.

**Wheels, Car, Wrought Steel—**

Thomas Prosser & Son, 26 Platt St., N.Y.

Sheffield Car Co., Three Rivers, Mich.

**Wheels, Carborundum—**

Carborundum Co., Niagara Falls, N. Y.

**Wheels, Caster, Soft Rubber**

M. B. Schenck Co., Meriden, Ct.

**Wheels, Caster, Wooden—**

W. R. Hartigan, Collinsville, Ct.

John Sommer Faucet Co., Newark, N. J.

**Wheels, Cast Steel—**

Chase Foundry & Mfg. Co., Columbus, O.

Thomas Prosser & Son, 26 Platt St., N.Y.

Taylor Iron & Steel Co., High Bridge,  
N. J.

**Wheels, Corundum—**

Abrasive Material Co., Philadelphia, Pa.

American Emery Wheel Works, Provi-  
dence, R. I.

E. C. Atkins & Co., Indianapolis, Ind.

Bridgeport Safety Emery Wheel Co.,  
Bridgeport, Ct.

Manning, Maxwell & Moore, Inc., 85  
Liberty St., New York.

Monarch Emery & Corundum Wheel Co.,  
Camden, N. J.

Northampton Emery Wheel Co., Leeds, Mass.

Norton Co., Worcester, Mass.

Pike Mfg. Co., Pike, N. H.

Royal Mfg. Co., Lancaster, Pa.

Safety Emery Wheel Co., Springfield, O.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

H. A. Stiles & Co., Boston, Mass.

Vitrified Wheel Co., Westfield, Mass.

#### **Wheels, Dental—**

American Emery Wheel Works, Providence, R. I.

Carborundum Co., Niagara Falls, N. Y.

Norton Co., Worcester, Mass.

Pike Mfg. Co., Pike, N. H.

#### **Wheels, Emery—**

Abrasive Material Co., Philadelphia, Pa.

American Emery Wheel Works, Providence, R. I.

E. C. Atkins & Co., Indianapolis, Ind.

Bridgeport Safety Emery Wheel Co., Bridgeport, Ct.

Carborundum Co., Niagara Falls, N. Y.

Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.

Monarch Emery & Corundum Wheel Co., Camden, N. J.

New York Belting & Packing Co., 91-93 Chambers St., New York.

Northampton Emery Wheel Co., Leeds, Mass.

Pike Mfg. Co., Pike, N. H.

Safety Emery Wheel Co., Springfield, O.

Springfield Mfg. Co., Bridgeport, Ct.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

H. A. Stiles & Co., Boston, Mass.

Vitrified Wheel Co., Westfield, Mass.

#### **Wheels, Emery Razor—**

Pike Mfg. Co., Pike, N. H.

#### **Wheels, Fifth—**

E. D. Clay Mfg. Co., Auburn, N. Y.

Richard Eocles Co., Auburn, N. Y.

Millersburg Fifth Wheel Co., Millersburg, Pa.

M. Seward & Son Co., New Haven, Ct.

#### **Wheels, Fly—**

(See Fly Wheels.)

#### **Wheels, Glass Cutters'—**

Pike Mfg. Co., Pike, N. H.

#### **Wheels, India Stone—**

Pike Mfg. Co., Pike, N. H.

#### **Wheels, Industrial Car—**

(See Axles and Wheels.)

#### **Wheels, Manganese Steel—**

Taylor Iron & Steel Co., High Bridge, N. J.

#### **Wheels, Mine Car—**

St. Louis Car Wheel Co., St. Louis, Mo.

#### **Wheels, Oil Stone—**

American Emery Wheel Works, Providence, R. I.

#### **Wheels, Polishing—**

American Emery Wheel Works, Providence, R. I.

Chas. H. Resly & Co., 15-21 S. Clinton St., Chicago, Ill.

Hanson & Van Winkle Co., Newark, N. J.

Osborn Mfg. Co., Cleveland, O.

Springfield Mfg. Co., Bridgeport, Ct.

Springfield Tire & Rubber Co., Springfield, O.

Sterling Emery Wheel Mfg. Co., Tiffin, O.

Zucker & Lett & Loeb Co., 526-530 West 25th St., New York.

#### **Wheels, Propeller—**

Pacific Iron Works, Bridgeport, Ct.

Paul S. Reeves & Son, Philadelphia, Pa.

#### **Wheels, Reducing—**

American Steam Gauge & Valve Mfg. Co., Boston, Mass.

#### **Wheels, Roll Grinding—**

Abrasive Material Co., Philadelphia, Pa.

American Emery Wheel Works, Providence, R. I.

Carborundum Co., Niagara Falls, N. Y.

Safety Emery Wheel Co., Springfield, O.

H. A. Stiles & Co., Boston, Mass.

Vitrified Wheel Co., Westfield, Mass.

#### **Wheels, Roller Skate—**

Boston Pressed Metal Co., Worcester, Mass.

W. R. Hartigan, Collinsville, Ct.

Pressed Steel Mfg. Co., Ridge Ave. and Willow St., Philadelphia, Pa.

Worcester Pressed Steel Co., Worcester, Mass.

#### **Wheels, Rubber Tired—**

Geo. P. Clark Co., Windsor Locks, Ct.

Kilbourne & Jacobs Mfg. Co., Columbus, O.

#### **Wheels, Self Oiling Car—**

Ernst Wiener Co., Church and Fulton Sts., New York.

#### **Wheels, Sprocket—**

Bethlehem Foundry & Machine Co., South Bethlehem, Pa.

Billings & Spencer Co., Hartford, Ct.

H. W. Caldwell & Son Co., Western Ave. and 17th St., Chicago, Ill.

W. E. Caldwell Co., Louisville, Ky.

Chrome Steel Works, Chrome, N. J.

Foot Bros. Gear & Machine Co., 24-30 So. Clinton St., Chicago, Ill.

Jeffrey Mfg. Co., Columbus, O.

W. A. Jones Foundry & Machine Co., 142-164 W. North Ave., Chicago, Ill.

John R. Keim Mills, Inc., Buffalo, N. Y.

Kilbourn & Bishop Co., New Haven, Ct.

Link Belt Co., Inc., Philadelphia, Pa.

New Process Raw Hide Co., Syracuse, N. Y.

Poole Engineering & Machine Co., Baltimore, Md.

Taylor Iron & Steel Co., High Bridge, N. J.

#### **Wheels, Steam Valve, Radiator, &c.—**

Piqua Handle & Mfg. Co., Piqua, O.

H. A. Stiles & Co., Boston, Mass.

#### **Wheels, Steel Tired—**

Thomas Prosser & Son, 25 Platt St., N. Y.

Taylor Iron & Steel Co., High Bridge, N. J.

#### **Wheels, Steering, for Vessels—**

Barnes Tool Co., New Haven, Ct.

#### **Wheels, Steering, Motor Boat and Yacht—**

Thomas Laughlin Co., Portland, Me.

#### **Wheels, Tire, Measuring—**

Wells Bros. Co., Greenfield, Mass.

Wiley & Russell Mfg. Co., Greenfield, Mass.

#### **Wheels, Tracing—**

Arcade Mfg. Co., Freeport, Ill.

#### **Wheels, Traveling Crane—**

Case Crane Co., Columbus, O.

#### **Wheels, Trolley—**

Pressed Steel Mfg. Co., Ridge Ave. and Willow St., Philadelphia, Pa.

**Wheels, Trolley, Bronze—**  
H. B. Ives Co., New Haven, Ct.  
R. D. Nuttall Co., Pittsburgh, Pa.

**Wheels, Truck—**  
Atlas Car & Mfg. Co., Cleveland, O.  
Boston & Lockport Block Co., East Boston, Mass.  
Chase Foundry & Mfg. Co., Columbus, O.  
Geo. P. Clark Co., Windsor Locks, Ct.  
W. J. Clark Co., Salem, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Arthur Koppel Co., Pittsburgh, Pa.  
St. Louis Car Wheel Co., St. Louis, Mo.

**Wheels, Truck, Roller Bearings for—**  
Bancroft & Co., Philadelphia, Pa.

**Wheels, Vehicle—**  
Kilbourne & Jacobs Mfg. Co., Columbus, O.

**Wheels, Water—**  
(See Water Wheels.)

**Wheels, Well—**  
Peck, Stow & Wilcox Co., 27 Murray St., New York.  
Reading Hardware Co., Reading, Pa.  
Susquehanna Casting Co., Wrightsville, Pa.  
Wrightsville Hardware Co., Wrightsville, Pa.

**Whip Sockets—**  
(See Sockets, Whip.)

**Whips, Carpet—**  
(See Beaters, Clothes, Carpet, &c.)

**Whips, Cream—**  
J. S. Dunlap, 215-219 S. Clinton St., Chicago, Ill.

**Whips, Egg—**  
(See Beaters, Egg.)

**Whiskey Scales—**  
(See Gauging, Liquids.)

**Whiskey Tacks—**  
(See Tacks, Stamp or Whiskey.)

**Whistles, Air—**  
Lunkenheimer Co., Cincinnati, O.

**Whistles, Alarm—**  
Lunkenheimer Co., Cincinnati, O.  
Mossberg Wrench Co., Central Falls, R.I.  
W. R. Ostrander & Co., 22 Dey St., N. Y.  
Walworth Mfg. Co., Boston, Mass.

**Whistles, Speaking Tube—**  
W. R. Ostrander & Co., 22 Dey St., N. Y.

**Whistles, Steam—**  
American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
Ashton Valve Co., Boston, Mass.  
Crosby Steam Gauge & Valve Co., Boston.  
Thomas Laughlin Co., Portland Me.  
Lunkenheimer Co., Cincinnati, O.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
Wm. Powell Co., Cincinnati, O.  
Walworth Mfg. Co., Boston, Mass.

**Whistles, Steam, Electrically—**  
Lunkenheimer Co., Cincinnati, O.

**White Brass—**  
(See Brass, White.)

**White Lead—**  
Hazard Lead Works, Inc., Hazardville, Ct.  
Martin-Senour Co., 2514 Quarry St., Chicago, Ill.  
Thompson & Co., Allegheny, Pa.

**White Lead Machinery—**  
Poole Engineering & Machine Co., Baltimore, Md.

**Whitewash Brushes—**  
(See Brushes, Whitewash, Horse, &c.)

**Whitewashing Machines—**  
(See Paint and Whitewash Spraying Machines.)

**Wick, Candle—**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Estes Mills, Fall River, Mass.  
A. Leschen & Sons Rope Co., St. Louis.

**Wickets—**  
(See Iron, Brass and Bronze, Ornamental.)

**Winches—**  
Bethlehem Foundry & Machine Co., South Bethlehem, Pa.  
Brown Hoisting Machinery Co., Cleveland, O.  
Byram & Co., Detroit, Mich.  
Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, Ill.  
Irving Mfg. & Tool Co., 157 Chambers St., New York.  
Manning, Maxwell & Moore, Inc., 85 Liberty St., New York.  
J. G. Spidel, Reading, Pa.  
Vulcan Iron Works, 24 No. Irving Ave., Chicago, Ill.  
Yale & Towne Mfg. Co., 9 Murray St., New York.

**Winches, Electric—**  
Crocker-Wheeler Co., Ampere, N. J.  
Northern Engineering Works, Detroit, Mich.

**Wind Mill Pumps, Regulators, Tanks—**  
(See Pumps, Regulators, Tanks.)

**Wind Mills—**  
(See Mills, Wind.)

**Winders, Chain Link—**  
(See Chain Machinery.)

**Winders, Sheet Metal—**  
Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

**Windlasses—**  
Thos. Carlin's Sons Co., N. S. Pittsburgh, Pa.  
Irving Mfg. & Tool Co., 157 Chambers St., New York.  
Thomas Laughlin Co., Portland Me.  
Seule Steam Feed Works, Meridian, Miss.  
Wilcox, Crittenden & Co., Inc., Middletown, Ct.

**Window Caps—**  
(See Caps, Door and Window, Metal.)

**Window Frames and Sash, Fire Proof—**  
E. B. Badger & Sons Co., Boston, Mass.  
Davidson's Sons Co., Westmoreland and Janney Sts., Philadelphia, Pa.

**Window Opening Devices—**  
(See Openers, Sash and Window.)

**Window Operating Device—**  
(See Ventilating System, Factory Sash Operating.)

**Window Pull Down Poles—**  
(See Poles, Window Pull Down.)

**Window Screens—**  
(See Screens, Window.)

**Window Spring Bolts—**  
(See Bolts, Window Spring.)

**Windows, Reversible—**  
Phenix Mfg. Co., Milwaukee, Wis.

**Window Stop Adjusters—**  
(See Adjusters, Window Stop.)

**Window Ventilating Bolts—**  
(See Bolts, Window Ventilating.)**Wire Pitchers—**  
(See Pitchers, Silver Plated.)**Wire, Aluminum—**

Aluminum Co. of America, Pittsburgh, Pa.  
Scovill Mfg. Co., Waterbury, Ct.

**Wire, Annealed Stone—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Morgan Spring Co., Worcester, Mass.  
Spencer Wire Co., Worcester, Mass.  
Wickwire Bros., Cortland, N. Y.  
Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire, Armature Binding—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire, Armor—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Washburn Wire Co., Phillipsdale, R. I.

**Wire, Awl—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.  
Morgan Spring Co., Worcester, Mass.  
Pittsburgh Tool Steel Wire Co., Monaca,  
Pa.

Washburn Wire Co., Phillipsdale, R. I.

**Wire, Baling—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Grand Crossing Tack Co., Grand Cross-  
ing, Ill.  
Morgan Spring Co., Worcester, Mass.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire, Barbed—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Grand Crossing Tack Co., Grand Cross-  
ing, Ill.  
Griswold Co., Sterling, Ill.  
Keystone Steel & Wire Co., Peoria, Ill.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.  
Pittsburgh Steel Co., Pittsburgh, Pa.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire, Basket Handle—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Morgan Spring Co., Worcester, Mass.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire Basket Handles—**  
(See Handles, Basket, Wire.)**Wire, Belt Hook—**

(See Hooks, Belt.)

**Wire, Bicycle and Auto-  
mobile Spoke—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Morgan Spring Co., Worcester, Mass.  
Geo. W. Prentiss & Co., Holyoke, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Wire Goods Co., Worcester, Mass.

**Wire, Binding—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Phosphor-Bronze Smelting Co., Ltd., 2200  
Washington Ave., Philadelphia, Pa.

**Wire, Bolt—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Grand Crossing Tack Co., Grand Crossing,  
Ill.

Morgan Spring Co., Worcester, Mass.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Wright Wire Co., Worcester, Mass.  
Phosphor-Bronze Smelting Co., Ltd., 2200  
Washington Ave., Philadelphia, Pa.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire, Bottling, Book Bind-  
er, &c.—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Baird Machine Co., Oakville, Ct.  
Morgan Spring Co., Worcester, Mass.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.  
Geo. W. Prentiss & Co., Holyoke, Mass.  
Spencer Wire Co., Worcester, Mass.  
Wickwire Bros., Cortland, N. Y.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire, Brass and Copper—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Bridgeport Brass Co., 253 B'way, N. Y.  
Dufur & Co., Baltimore, Md.  
Hazard Mfg. Co., Wilkes-Barre, Pa.  
U. T. Hungerford Brass & Copper Co.,  
497-505 Pearl St., New York.  
Michigan Wire Cloth Co., Detroit, Mich.  
Plume & Atwood Mfg. Co., Waterbury,  
Ct.

Riverside Metal Co., Riverside, N. J.  
Arthur T. Rutter & Co., 256 Broadway,  
New York.

Scovill Mfg. Co., Waterbury, Ct.  
Seymour Mfg. Co., Seymour, Ct.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Waterbury Brass Co., Waterbury, Ct.  
Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.

**Wire, Brass Pinion—**

Bridgeport Brass Co., 253 B'way, N. Y.  
Hobson, Houghton & Co., 21 Cliff St.,  
New York.

Riverside Metal Co., Riverside, N. J.  
Waterbury Brass Co., Waterbury, Ct.

**Wire, Brass Plated—**

Spencer Wire Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.

**Wire, Brick Cutting—**

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Morgan Spring Co., Worcester, Mass.

Geo. Nash Co., 115 Washington Boulevard, Chicago, Ill.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Wire, Bridge Pin—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Morgan Spring Co., Worcester, Mass.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

**Wire, Bronze—**

Chas. H. Bealy & Co., 15-21 S. Clinton

St., Chicago, Ill.

Bridgeport Brass Co., 253 B'way, N. Y.

Dufur & Co., Baltimore, Md.

Michigan Wire Cloth Co., Detroit, Mich.

Morgan Spring Co., Worcester, Mass.

Phosphor Bronze Smelting Co., Ltd., 2200

Washington Ave., Philadelphia, Pa.

Riverside Metal Co., Riverside, N. J.

Arthur T. Rutler & Co., 256 Broadway,

New York.

Scovill Mfg. Co., Waterbury, Ct.

Seymour Mfg. Co., Seymour, Ct.

Waterbury Brass Co., Waterbury, Ct.

Wright Wire Co., Worcester, Mass.

**Wire, Broom and Brush—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Cary Spring Works, 240-242 W. 29th St.,

New York.

Morgan Spring Co., Worcester, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, E. I.

Wickwire Bros., Cortland, N. Y.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Wire Brushes—**

(See Brushes, Wire.)

**Wire, Buckle—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Morgan Spring Co., Worcester, Mass.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, E. I.

Wickwire Bros., Cortland, N. Y.

Youngtown Sheet & Tube Co., Youngs-

town, O.

**Wire, Bundling—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Grand Crossing Tack Co., Grand Cross-

ing, Ill.

Morgan Spring Co., Worcester, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, E. I.

Wickwire Bros., Cortland, N. Y.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngs-

town, O.

**Wire, Butt—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Grand Crossing Tack Co., Grand Cross-

ing, Ill.

Morgan Spring Co., Worcester, Mass.

Riverside Metal Co., Riverside, N. J.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, E. I.

Wickwire Bros., Cortland, N. Y.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngs-

town, O.

**Wire, Button Fastener—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Morgan Spring Co., Worcester, Mass.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, E. I.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngs-

town, O.

**Wire, Button Hook—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Morgan Spring Co., Worcester, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, E. I.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngs-

town, O.

**Wire, Cable Armor—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Wright Wire Co., Worcester, Mass.

**Wire, Card—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Cary Spring Works, 240-242 W. 29th St.,

New York.

Phosphor-Bronze Smelting Co., Ltd., 2200

Washington Ave., Philadelphia, Pa.

Geo. W. Prentiss & Co., Holyoke, Mass.

Riverside Metal Co., Riverside, N. J.

Spencer Wire Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Wire, Car Seal—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, E. I.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngs-

town, O.

**Wire, Cast Steel—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Cary Spring Works, 240-242 W. 29th St.,

New York.

Kidd Bros. & Burgher Steel Wire Co.,

Aliquippa, Pa.

Miller & Van Winkle, Brooklyn, N. Y.

Morgan Spring Co., Worcester, Mass.

Geo. Nash Co., 115 Washington Boule-

vard, Chicago, Ill.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, E. I.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Wire, Check Rower—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Youngtown Sheet & Tube Co., Youngs-

town, O.

**Wire, Chisels, Coilers, &c.—**

(See Chisels, Coilers, &c.)

**Wire, Clock Spring—**

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Cary Spring Works, 240-242 W. 29th St.,

New York.

Kidd Bros. & Burgher Steel Wire Co.,

Aliquippa, Pa.



Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
 Wright Wire Co., Palmer, Mass.  
 Youngstown Sheet & Tube Co., Youngstown, O.

#### Wire, Hair Pin—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Spencer Wire Co., Worcester, Mass.  
 Wright Wire Co., Worcester, Mass.  
 Youngstown Sheet & Tube Co., Youngstown, O.

#### Wire, Haulage—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Wright Wire Co., Worcester, Mass.

#### Wire, Heddle—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Geo. W. Prentiss & Co., Holyoke, Mass.  
 Spencer Wire Co., Worcester, Mass.  
 Washburn Wire Co., Phillipsdale, R. I.  
 Wright Wire Co., Worcester, Mass.

#### Wire, Hoisting Rope—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Hazard Mfg. Co., Wilkes-Barre, Pa.  
 Phosphor-Bronze Smelting Co. Ltd., 2200 Washington Ave., Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.  
 Washburn Wire Co., Phillipsdale, R. I.  
 Wright Wire Co., Palmer, Mass.  
 Youngstown Sheet & Tube Co., Youngstown, O.

#### Wire, Hook and Eye—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Bridgeport Brass Co., 253 B'way, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 Spencer Wire Co., Worcester, Mass.  
 Waterbury Brass Co., Waterbury, Ct.  
 Wire Goods Co., Worcester, Mass.  
 Youngstown Sheet & Tube Co., Youngstown, O.

#### Wire, Horse Card—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Spencer Wire Co., Worcester, Mass.

#### Wire, Horse Nail—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Spencer Wire Co., Worcester, Mass.

#### Wire, Hutter—

Morgan Spring Co., Worcester, Mass.  
 Spencer Wire Co., Worcester, Mass.

#### Wire in Small Coils—

Malin & Co., Cleveland, O.

#### Wire, Iron and Steel, Market, Fence, Stone, &c.—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Dufur & Co., Baltimore, Md.  
 Grand Crossing Tack Co., Grand Crossing, Ill.  
 Griswold Co., Sterling, Ill.  
 Keystone Steel & Wire Co., Peoria, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Parker Wire Goods Co., Worcester, Mass.  
 Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
 Geo. W. Prentiss & Co., Holyoke, Mass.  
 Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, R. I.  
 Wickwire Bros., Cortland, N. Y.  
 Wire Goods Co., Worcester, Mass.  
 Wright Wire Co., Worcester, Mass.  
 Youngstown Sheet & Tube Co., Youngstown, O.

#### MERCHANTS

Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.

#### Wire Kitchen Articles—

(See Kitchen Articles, Wire.)

#### Wire, Lock, Hat, Brush and Curtain—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Cary Spring Works, 240-242 W. 29th St., New York.

Miller & Van Winkle, Brooklyn, N. Y.  
 Phosphor-Bronze Smelting Co. Ltd., 2200 Washington Ave., Philadelphia, Pa.  
 Geo. W. Prentiss & Co., Holyoke, Mass.  
 Spencer Wire Co., Worcester, Mass.  
 Washburn Wire Co., Phillipsdale, R. I.  
 Wire Goods Co., Worcester, Mass.  
 Wright Wire Co., Worcester, Mass.

#### Wire Lockers—

(See Lockers, Office and Shop.)

#### Wire Machinery, Barbed—

Wilber Emery, Wilmington, Del.  
 Humphrey & Sons, Joliet, Ill.

#### Wire, Mattress—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Spencer Wire Co., Worcester, Mass.  
 Wright Wire Co., Worcester, Mass.  
 Youngstown Sheet & Tube Co., Youngstown, O.

#### Wire Mill Plants and Equipment—

Humphrey & Sons, Joliet, Ill.  
 Morgan Construction Co., Worcester, Mass.  
 Waterbury Farrel Foundry & Machine Co., Waterbury, Ct.

#### Wire, Music—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Cary Spring Works, 240-242 W. 29th St., New York.  
 Hobson, Houghton & Co., Ltd., 21 Cliff St., New York.

Malin & Co., Cleveland, O.  
 Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
 Schuchardt & Schutte, 90 West St., N. Y.  
 Spencer Wire Co., Worcester, Mass.  
 Washburn Wire Co., Phillipsdale, R. I.

#### Wire, Nail—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Grand Crossing Tack Co., Grand Crossing, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Phosphor Bronze Smelting Co. Ltd., 2200 Washington Ave., Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.  
 Spencer Wire Co., Worcester, Mass.  
 Washburn Wire Co., Phillipsdale, R. I.  
 Wire Goods Co., Worcester, Mass.  
 Youngstown Sheet & Tube Co., Youngstown, O.

**Wire Nail Plants and Equipment—**

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Wire, Nail Set—**

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**Wire, Needle—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Hobson, Houghton & Co., Ltd., 21 Cliff St., New York.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Morgan Spring Co., Worcester, Mass.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

Washburn Wire Co., Phillipsdale, R. I.

Wheelock, Lovejoy & Co., 23 Cliff St., N. Y.

**Wire, Nickel—**

Hermann Boker & Co., 101-103 Duane St., New York.

Thomas Prosser & Son, 26 Platt St., N.Y.

Seymour Mfg. Co., Seymour, Ct.

Spencer Wire Co., Worcester, Mass.

**Wire, Nickel-Bronze—**

Indestructible Metal Co., 50 Church St., New York.

**Wire, Nickel Plated—**

Spencer Wire Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

**Wire, Nickel-Steel—**

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

Thomas Prosser & Son, 26 Platt St., N.Y.

**Wire, Norway Iron—**

Morgan Spring Co., Worcester, Mass.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Wire, Pail Bail—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Grand Crossing Tack Co., Grand Crossing, Ill.

Morgan Spring Co., Worcester, Mass.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, R. I.

Wickwire Bros., Cortland, N. Y.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngstown, O.

**Wire, Phosphor Bronze—**

Bridgeport Brass Co., 253 Broadway, N. Y.

Cary Spring Works, 240-242 W. 29th St., New York.

Miller & Van Winkle, Brooklyn, N. Y.

Phosphor Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.

Paul S. Reeves & Son, Philadelphia, Pa.

Riverside Metal Co., Riverside, N. J.

Arthur T. Rutten & Co., 256 Broadway, New York.

Spencer Wire Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Wire, Piano—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Cary Spring Works, 240-242 W. 29th St., New York.

Miller & Van Winkle, Brooklyn, N. Y.

Morgan Spring Co., Worcester, Mass.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, R. I.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngstown, O.

Wire, Picture—

Parker Wire Goods Co., Worcester, Mass.

Spencer Wire Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

(See also Cord, Wire, Picture.)

**Wire, Pin—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Bridgeport Brass Co., 253 Broadway, N. Y.

Morgan Spring Co., Worcester, Mass.

Riverside Metal Co., Riverside, N. J.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, R. I.

Waterbury Brass Co., Waterbury, Ct.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngstown, O.

**Wire, Pinion—**

Bridgeport Brass Co., 253 Broadway, N. Y.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

Riverside Metal Co., Riverside, N. J.

**Wire, Pivot—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

Wire, Platinum—

Baker & Co., Inc., Newark, N. J.

J. Bishop & Co., Malvern, Pa.

**Wire, Platinum Plated—**

Ellwood Irons Tube Works, Oak Lane Sta., Philadelphia, Pa.

**Wire, Plow Steel—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Morgan Spring Co., Worcester, Mass.

Geo. W. Prentiss & Co., Holyoke, Mass.

Washburn Wire Co., Phillipsdale, R. I.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngstown, O.

**Wire, Pointing, Reducing and Swaging, to order—**

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

**Wire, Reed—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Morgan Spring Co., Worcester, Mass.

Geo. W. Prentiss & Co., Holyoke, Mass.

Spencer Wire Co., Worcester, Mass.

Washburn Wire Co., Phillipsdale, R. I.

Wright Wire Co., Worcester, Mass.

**Wire Reinforcing Fabrics for Concrete—**

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Clinton Wire Cloth Co., Clinton, Mass.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

Wright Wire Co., Worcester, Mass.

**Wire, Resistance—**

Bridgeport Brass Co., 253 Broadway, N. Y.

Thomas Prosser & Son, 26 Platt St., N.Y.  
Riverside Metal Co., Riverside, N. J.  
Arthur T. Rutter & Co., 256 Broadway,  
New York.

Seymour Mfg. Co., Seymour, Ct.  
Washburn Wire Co., Phillipsdale, R. I.

#### Wire, Rivet—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Bridgeport Brass Co., 253 B'way, N. Y.  
Grand Crossing Tack Co., Grand Crossing,  
Ill.

Morgan Spring Co., Worcester, Mass.  
Phosphor Bronze Smelting Co., Ltd., 2200  
Washington Ave., Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.  
Seymour Mfg. Co., Seymour, Ct.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Waterbury Brass Co., Waterbury, Ct.  
Wickwire Bros., Cortland, N. Y.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

#### Wire Rod Reels—

(See Reels, Wire Rod.)

#### Wire Rods—

(See Rods, Wire.)

#### Wire, Rope—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Hazard Mfg. Co., Wilkes-Barre, Pa.  
Phosphor Bronze Smelting Co., Ltd., 2200  
Washington Ave., Philadelphia, Pa.  
George W. Prentiss & Co., Holyoke, Mass.  
Riverside Metal Co., Riverside, N. J.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Wright Wire Co., Palmer, Mass.

#### Wire Rope Blocks and Shears—

(See Blocks, Shears.)

#### Wire Rope Clamps, Clips, &c.—

(See Clamps, Clips, &c.)

#### Wire, Round Tempered—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Cary Spring Works, 240-242 W. 29th St.,  
New York.  
Miller & Van Winkle, Brooklyn, N. Y.  
Morgan Spring Co., Worcester, Mass.  
Geo. Nash Co., 115 Washington Boule-  
vard, Chicago, Ill.  
Geo. W. Prentiss & Co., Holyoke, Mass.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

#### Wire, Rubber Insulated—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
**Wire, Sash Cord—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Phosphor-Bronze Smelting Co., Ltd., 2200  
Washington Ave., Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.  
Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.

#### Wire, Screw—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.

Grand Crossing Tack Co., Grand Crossing.  
Kidd Bros. & Burgher Steel Wire Co.,  
Ill.

Aliquippa, Pa.  
Morgan Spring Co., Worcester, Mass.  
Geo. W. Prentiss & Co., Holyoke, Mass.  
Spencer Wire Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

#### Wire, Screw Driver—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Grand Crossing Tack Co., Grand Crossing,  
Ill.

Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.

Morgan Spring Co., Worcester, Mass.  
Pittsburgh Tool Steel Wire Co., Monaca,  
Pa.

Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.

#### Wire, Screw Eye—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Grand Crossing Tack Co., Grand Cross-  
ing, Ill.

Morgan Spring Co., Worcester, Mass.  
Spencer Wire Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

#### Wire, Screw Rod—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Grand Crossing Tack Co., Grand Cross-  
ing, Ill.

Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.  
Phosphor Bronze Smelting Co., Ltd., 2200  
Washington Ave., Philadelphia, Pa.  
Riverside Metal Co., Riverside, N. J.  
Spencer Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

#### Wire Shapes, to Order—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Blake & Johnson Co., Waterbury, Ct.  
Hindley Mfg. Co., Valley Falls, R. I.  
R. C. Jenkinson & Co., Newark, N. J.  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.

Homer F. Livermore, Boston, Mass.  
Miller & Van Winkle, Brooklyn, N. Y.  
Morgan Spring Co., Worcester, Mass.  
Parker Wire Goods Co., Worcester, Mass.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.  
Raymond Mfg. Co., Corry, Pa.  
Arthur T. Rutter & Co., 256 Broadway,  
New York.

F. P. Smith & Co., Sharon Hill, Pa.  
Spencer Wire Co., Worcester, Mass.  
E. H. Titchener & Co., Binghamton,  
N. Y.

Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.

#### Wire, Ship Rigging—

American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Wright Wire Co., Worcester, Mass.

**Wire, Signal or Semaphore—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
**Grand Crossing Tack Co., Grand Cross-**  
**ing, Ill.**

**Wire, Soft, Coppered,**  
**Bright and Annealed—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
**Grand Crossing Tack Co., Grand Crossing,**  
**Ill.**

Morgan Spring Co., Worcester, Mass.  
Geo. W. Prentiss & Co., Holyoke, Mass.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Wickwire Bros., Cortland, N. Y.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**MERCHANTS.**

Harold McCalla, 444 Fairmount Ave.,  
Philadelphia, Pa.

**Wire, Span—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
**Grand Crossing Tack Co., Grand Cross-**  
**ing, Ill.**  
Morgan Spring Co., Worcester, Mass.

**Wire, Special—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Bridgeport Brass Co., 253 B'way, N. Y.  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.  
Morgan Spring Co., Worcester, Mass.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.

**Phosphor Bronze Smelting Co., 2200 Wash-**  
**ington Ave., Philadelphia, Pa.**  
Geo. W. Prentiss & Co., Holyoke, Mass.  
Thomas Prosser & Son, 26 Platt St., N. Y.  
Riverside Metal Co., Riverside, N. J.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire Splicing Pliers—**  
(See Pliers, Knot Tying and Splicing.)

**Wire, Spooled—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Bridgeport Brass Co., 253 B'way, N. Y.  
Malin & Co., Cleveland, O.  
Fred J. Meyers Mfg. Co., Hamilton, O.  
Parker Wire Goods Co., Worcester, Mass.  
Geo. W. Prentiss & Co., Holyoke, Mass.  
Arthur T. Rutter & Co., 256 Broadway,  
New York.

Seymour Mfg. Co., Seymour, Ct.  
Spencer Wire Co., Worcester, Mass.  
Turner & Stanton Co., Norwich, Ct.  
Waterbury Brass Co., Waterbury, Ct.  
Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.

**Wire, Spring—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Bridgeport Brass Co., 253 B'way, N. Y.  
Cary Spring Works, 240-242 W. 29th St.,  
New York.  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.

Miller & Van Winkle, Brooklyn, N. Y.  
Morgan Spring Co., Worcester, Mass.  
Phosphor Bronze Smelting Co., Ltd., 2200  
Washington Ave., Philadelphia, Pa.  
Pittsburgh Tool Steel Wire Co., Monaca,  
Pa.

Geo. W. Prentiss & Co., Holyoke, Mass.  
Riverside Metal Co., Riverside, N. J.  
Seymour Mfg. Co., Seymour, Ct.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Waterbury Brass Co., Waterbury, Ct.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire, Spring, Brass—**  
Bridgeport Brass Co., 253 Broadway, N. Y.  
Miller & Van Winkle, Brooklyn, N. Y.  
Seymour Mfg. Co., Seymour, Ct.  
Wright Wire Co., Worcester, Mass.

**Wire, Steel, Covered with**  
**Nickel—**  
Hermann Boker & Co., 101-103 Duane St.,  
New York.

Morgan Spring Co., Worcester, Mass.  
Spencer Wire Co., Worcester, Mass.  
Wire Goods Co., Worcester, Mass.

**Wire, Steel, High Speed—**  
Spencer Wire Co., Worcester, Mass.

**Wire, Stove Pipe, Coiled—**  
Malin & Co., Cleveland, O.

**Wire Straightened and Cut—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Blake & Johnson Co., Waterbury, Ct.  
Bridgeport Brass Co., 253 B'way, N. Y.  
Cary Spring Works, 240-242 W. 29th St.,  
New York.

Garland Nut & Rivet Co., Pittsburgh, Pa.  
Grand Crossing Tack Co., Grand Crossing,  
Ill.

Griswold Co., Sterling, Ill.  
R. C. Jenkinson & Co., Newark, N. J.  
Kidd Bros. & Burgher Steel Wire Co.,  
Aliquippa, Pa.

Kilbourne Mfg. Co., Troy, N. Y.  
Miller & Van Winkle, Brooklyn, N. Y.  
Morgan Spring Co., Worcester, Mass.  
Parker Wire Goods Co., Worcester, Mass.  
Phosphor Bronze Smelting Co., Ltd., 2200  
Washington Ave., Philadelphia, Pa.  
Philadelphia Steel & Wire Co., 525 Com-  
merce St., Philadelphia, Pa.

Geo. W. Prentiss & Co., Holyoke, Mass.  
Seymour Mfg. Co., Seymour, Ct.  
Spencer Wire Co., Worcester, Mass.  
Washburn Wire Co., Phillipsdale, R. I.  
Waterbury Brass Co., Waterbury, Ct.  
Wire Goods Co., Worcester, Mass.  
Wright Wire Co., Worcester, Mass.  
Youngtown Sheet & Tube Co., Youngs-  
town, O.

**Wire Straightening and**  
**Cutting Machines—**  
(See Straightening and Cutting Machines,  
Wire.)

**Wire, Strand, Galvanized,**  
**Guy—**  
American Steel & Wire Co., Commercial  
National Bank Bldg., Chicago, Ill.  
Broderick & Bascom Rope Co., St. Louis.  
Grand Crossing Tack Co., Grand Crossing,  
Ill.

Hazard Mfg. Co., Wilkes-Barre, Pa.  
 A. Leschen & Sons Rope Co., St. Louis.  
 Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
 Washburn Wire Co., Phillipsdale, R. I.  
 Wire Goods Co., Worcester, Mass.  
 Wright Wire Co., Worcester, Mass.

#### Wire, Tack—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Spencer Wire Co., Worcester, Mass.  
 Wire Goods Co., Worcester, Mass.  
 Wright Wire Co., Worcester, Mass.  
 Youngtown Sheet & Tube Co., Youngstown, O.

#### Wire, Telephone and Telegraph, Bronze—

Bridgeport Brass Co., 253 Broadway, N. Y.  
 Phosphor Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.

#### Wire, Telephone and Telegraph, Copper—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Bridgeport Brass Co., 253 Broadway, N. Y.

#### Wire, Telephone and Telegraph, Iron—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Griswold Co., Sterling, Ill.  
 Keystone Steel & Wire Co., Peoria, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Washburn Wire Co., Phillipsdale, R. I.

#### Wire, Tempered, Cast Steel—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Cary Spring Works, 240-242 W. 29th St., New York.

Miller & Van Winkle, Brooklyn, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 Geo. W. Prentiss & Co., Holyoke, Mass.  
 Spencer Wire Co., Worcester, Mass.  
 Washburn Wire Co., Phillipsdale, R. I.  
 Wright Wire Co., Worcester, Mass.

#### Wire, Tinned—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Bridgeport Brass Co., 253 Broadway, N. Y.  
 Morgan Spring Co., Worcester, Mass.  
 Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.  
 Geo. W. Prentiss & Co., Holyoke, Mass.  
 Seymour Mfg. Co., Seymour, Ct.  
 Spencer Wire Co., Worcester, Mass.  
 Washburn Wire Co., Phillipsdale, R. I.  
 Wickwire Bros., Cortland, N. Y.  
 Wright Wire Co., Worcester, Mass.  
 Youngtown Sheet & Tube Co., Youngstown, O.

#### MERCHANTS,

Harold McCalla, 444 Fairmount Ave., Philadelphia, Pa.

#### Wire, Tinned, Bronze—

Phosphor Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.  
 Seymour Mfg. Co., Seymour, Ct.

#### Wire, Transom, Rod—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.

Grand Crossing Tack Co., Grand Crossing, Ill.

Morgan Spring Co., Worcester, Mass.  
 Spencer Wire Co., Worcester, Mass.  
 Washburn Wire Co., Phillipsdale, R. I.

#### Wire Trays, Paper—

(See Trays, Paper and Letter, Wire.)

#### Wire, Trolley, Copper—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Bridgeport Brass Co., 253 Broadway, N. Y.

#### Wire, Umbrella—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Phosphor Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.  
 Washburn Wire Co., Phillipsdale, R. I.  
 Youngtown Sheet & Tube Co., Youngstown, O.

#### Wire, Vanadium—

Pittsburgh Tool Steel Wire Co., Monaca, Pa.

#### Wire, Vestibule Rod—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Spencer Wire Co., Worcester, Mass.

#### Wire, Watch—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Cary Spring Works, 240-242 W. 29th St., New York.

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Washburn Wire Co., Phillipsdale, R. I.

#### Wire, Watch Spring—

Washburn Wire Co., Phillipsdale, R. I.

#### Wire Weaving—

American Steel & Wire Co., Commercial National Bank Bldg., Chicago, Ill.  
 Morgan Spring Co., Worcester, Mass.  
 Phosphor Bronze Smelting Co., Ltd., 2200 Washington Ave., Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.  
 Arthur T. Rutter & Co., 256 Broadway, New York.

Spencer Wire Co., Worcester, Mass.

W. S. Tyler Co., Cleveland, O.

Wickwire Bros., Cortland, N. Y.

Wright Wire Co., Worcester, Mass.

Youngtown Sheet & Tube Co., Youngstown, O.

#### Wire, White—

Seymour Mfg. Co., Seymour, Ct.

#### Wire Window Guards—

(See Guards, Wire Window.)

#### Wire, Wollaston, Silver

#### Covered Platinum, for

#### Wireless Telegraphy—

Baker & Co., Inc., Newark, N. J.

#### Wire, Wood Bit—

Kidd Bros. & Burgher Steel Wire Co., Aliquippa, Pa.

Morgan Spring Co., Worcester, Mass.

#### Wire Work, Special—

(See Wire Work, to Order.)

**Wire Work, to order—**

Anchor Post Iron Works, 27 Cortlandt St., New York.

Baird Machine Co., Oakville, Ct.

Blake & Johnson Co., Waterbury, Ct.

Buffalo Wire Works Co., Buffalo, N. Y.

Clinton Wire Cloth Co., Clinton, Mass.

Edward Darby & Sons, 235-236 Arch St., Philadelphia, Pa.

Dufur & Co., Baltimore, Md.

Estey Wire Works Co., 59 Fulton St., New York.

Forest City Steel & Iron Co., Cleveland.

Gilbert & Bennett Mfg. Co., 277 Broadway, New York.

Glen Mfg. Co., Ellwood City, Pa.

Howard & Morse, 45 Fulton St., N. Y.

R. C. Jenkinson & Co., Newark, N. J.

Ludlow-Saylor Wire Co., St. Louis, Mo.

Michigan Wire Cloth Co., Detroit, Mich.

Morgan Spring Co., Worcester, Mass.

Nimmo Fence & Wire Works Co., Norwood, O.

Parker Wire Goods Co., Worcester, Mass.

Philadelphia Steel & Wire Co., 525 Commerce St., Philadelphia, Pa.

Spencer Wire Co., Worcester, Mass.

Stewart Iron Works Co., Cincinnati, O.

W. S. Tyler Co., Cleveland, O.

Van Dorn Iron Works Co., Cleveland, O.

Wright Wire Co., Worcester, Mass.

**Wires, Bond, Galvanized**

**Iron—**

Wright Wire Co., Worcester, Mass.

**Wires, Corset—**

Washburn Wire Co., Phillipsdale, R. I.

**Wires, Electrical (Magnet,**

**Weatherproof, Office, An-**

**nunciator, Lamp Cord,**

**Rubber and Paper Insula-**

**tion, Lead Covered, Ar-**

**mored, &c.)—**

Aluminum Co. of America, Pittsburgh, Pa.

American Steel & Wire Co., Commercial

National Bank Bldg., Chicago, Ill.

Bridgeport Brass Co., 253 B'way, N. Y.

General Electric Co., Schenectady, N. Y.

Hazard Mfg. Co., Wilkes-Barre, Pa.

Phosphor Bronze Smelting Co., 2200 Wash-

ington Ave., Philadelphia, Pa.

Riverside Metal Co., Riverside, N. J.

Washburn Wire Co., Phillipsdale, R. I.

Waterbury Brass Co., Waterbury, Ct.

**Wires, Galvanized, Plated,**

**Tinned, &c.—**

(See Galvanizing, Plating, Tinning, &c.)

**Wires, Headed—**

Wright Wire Co., Worcester, Mass.

**Wires, Mantel—**

Philadelphia Steel & Wire Co., 525 Com-

merce St., Philadelphia, Pa.

**Wires, Pointed—**

Reed & Prince Mfg. Co., Worcester,

Mass.

Wright Wire Co., Worcester, Mass.

**Wires, Threaded and Bent—**

Blake & Johnson Co., Waterbury, Ct.

Hartford Machine Screw Co., Hartford,

Ct.

Parker Wire Goods Co., Worcester, Mass.

Progressive Mfg. Co., Torrington, Ct.

Reed & Prince Mfg. Co., Worcester,

Mass.

Arthur T. Rutter & Co., 256 Broadway,

New York.

Spencer Wire Co., Worcester, Mass.

Wire Goods Co., Worcester, Mass.

Wright Wire Co., Worcester, Mass.

**Wires, Toilet Paper—**

Philadelphia Steel & Wire Co., 525 Com-

merce St., Philadelphia, Pa.

**Wood Preservatives—**

(See Preservatives, Wood.)

**Wood Faucets, &c.—**

(See Faucets.)

**Wood Sawing Machines—**

(See Sawing Machines, Wood.)

**Wood Sawing Outfits, Gas**

**and Gasoline—**

Foos Gas Engine Co., Springfield, O.

**Wood Saws—**

(See Saw Mills, Circular.)

**Wood Screws, Iron, Brass,**

**&c.—**

(See Screws, Wood.)

**Wood Substitutes—**

Asbestos Protected Metal Co., Canton,

Mass.

**Wood Turners' Tools—**

(See Tools, Wood Turners'.)

**Wood Working Machines—**

Badger State Machine Co., Janesville,

Wis.

Colburn Machine Tool Co., Franklin, Pa.

Covel Mfg. Co., Fisher Bldg., Chicago,

Ill.

Crescent Machine Co., Leetonia, O.

Fox Machine Co., Grand Rapids, Mich.

Peter Gerlach Co., Cleveland, O.

Greaves, Klusman & Co., Cincinnati, O.

Hobbs Mfg. Co., Worcester, Mass.

Humphrey Machine Co., Keene, N. H.

Lane Mfg. Co., Montpelier, Vt.

J. M. Marston & Co., Boston, Mass.

New Britain Machine Co., New Britain,

Ct.

Oliver Machinery Co., Grand Rapids,

Mich.

Seneca Falls Mfg. Co., Seneca Falls,

N. Y.

Wickes Bros., Saginaw, Mich.

Williams, White & Co., Moline, Ill.

**MERCHANTS.**

Baird Machinery Co., Pittsburgh, Pa.

Cleveland Belting & Machinery Co., Cleve-

land, O.

Hill, Clarke & Co., Boston, Mass.

McDowell, Stocker & Co., 59-61 S. Canal

St., Chicago, Ill.

Manning, Maxwell & Moore, Inc., 85-89

Liberty St., New York.

L. F. Seyfert's Sons, Inc., 437-441 Third

St., Philadelphia, Pa.

Frank Toomey, 127-131 N. Third St., Phil-

adelphia, Pa.

Vandyke, Churchill Co., 8 Dey St., N. Y.

A. O. Walworth & Co., 143-147 Clinton

St., Chicago, Ill.

C. C. Wormer Machinery Co., Detroit,

Mich.

